Economic Literature , Vol. LIV (June 2016) in order to foster cooperation and greater equality in society, but with a key role for historical and statistical analysis. In so doing, eventually this led to fundamental reforms in US economic policy including unem ployment insurance and child labor laws (Bateman and Kapstein 1999). And yet paradoxically, in a seminal article published in 1998 in the Journal of Economic Literature, Laurence Iannaccone introduced a new field of research to a wide audience of economists and other social scientists inquiry (McCleary 2011b; Oslington 2014). Consequently, there is a need to illuminate the new directions in the territory in which the economics of religion finds itself today, bringing up-to-date the many important developments in research that have been made along the way. This paper attempts to do this and its ambition is both back ward-looking as well as forward-looking. It identifies some of the most important devel opments in the economics of religion in the last couple of decades, notably: (1) new the economics of religion. In this paper he argued, "If the study of religion does not yet warrant a JEL classification number, let alone the subfield status it enjoys within every developments in theoretical models, includ ing spatial models of religious markets and evolutionary models of religious preferences other social science, it nevertheless qualifies and traits; (2) empirical work that innova tively addresses matters concerning econo as new territory within the expanding domain metric identification in examining causal of economics" (Iannaccone 1998, p. 1465). influences on religious behavior; (3) new How times have changed - apart from now research in the economic history of religion having its own JEL classification number (Z12), its own annual meetings, and a large body of international scholars invested and that considers religion as an independent, rather than a dependent, variable; and (4) more studies of religion outside the Western interested in this issue, the economics of reli gion has made important strides, with studies world. This paper also puts forward the still many unanswered questions in the econom that now encompass economic theory, public ics of religion that I hope scholars will reflect economics, experimental economics, mac upon in years to come. By highlighting how roeconomics of growth, economic history, developments in economic theory, econo and economic development.1 As Chen and metric concerns with identification, and new Hungerman (2014) rightly point out, there data both historical and contemporary, have has been a six-fold increase in the number of economics papers alone published in this area in the last decade. Although the field is still nascent compared to other fields of economics research, this increase has changed the way in which research in this field is currently being conducted, this paper attempts in short to survey, to evaluate, and to make suggestions for the "new" economics of religion. highlighted that the study of religion now falls firmly within the purview of economic Economic studies of religion contribute in three ways: first, they show how economic and statistical tools can be used to evalu iThe economics of religion, although it now has its own JEL code, still lacks its own journal. This

reflects the fact that research in the economics of religion intersects with other fields in economics such as labor economics, pub lic economics, and industrial organization, as well as fields outside economics in sociology and political science. Since authors can publish their work in a variety of venues, this often makes it difficult for a researcher to comprehend a complete grasp of the literature in the economics of religion. ate the role of religion in society; second, they continue to cast light on the econom ics of nonmarket behavior illustrating the role that norms, values, social capital, and "spiritual capital" may play in influencing human behaviors by affecting both beliefs and actions; and third, they show how cul ture more broadly, whether through religion This content downloaded from 70.150.177.5 on Wed, 07 Jul 2021 18:32:46 UTC All use subject to https://about.jstor.org/terms or other kinds of cultural beliefs, affect eco religious faith and this survey will not ven nomic systems. Many social scientists argue ture to comment on these topics. It is not that when explaining countries' economic that personal religious faith is unimportant; growth, we should evaluate the role of cul simply that as economists, it is difficult for us ture more deeply (Landes 1998; Norris and to comment on it appropriately. Inglehart 2004) and that as economists, Most theoretical research in the econom we ought to be vitally concerned about the moral consequences of economic growth (Friedman 2005). Others have argued that ics of religion focuses on the demand side in terms of the preferences of consumers of religion, or on the supply side in terms the evolution of markets and the evolution of morals, culture, and institutions, includ ing religion, need to be studied together (Friedman 2008; Bowles 1998). On the one hand, religion and culture inform economic behaviors and economic systems, markets, and institutions. On the other hand, ones economic environment is also likely to influ ence ones beliefs, morals, and religious choices. So the economic approach directly links the study of markets with the study of religion and culture.2 In his 1998 review, Iannaccone made a very clear distinction between the econom ics of religion and other areas of academic inquiry that is worth reiterating here. The economics of religion is research that uses the tools and methods of economics to study religion as a dependent variable or to study religion as an independent variable on other socioeconomic outcomes. In doing so, it draws upon ideas in public economics, labor economics, industrial organization, devel opment economics, and international trade, and uses tools developed in game theory and econometrics. The economics of religion must be distinguished from what might be called "religious economics," which would be the use of religious ideas to provide social commentary on economic systems or behaviors. The economics of religion also does not concern itself with the theological and institutional propagation of personal 2 It is to be acknowledged that when discussing insti tutions, economists do distinguish between religion and culture. of the structures of religious organizations. While early work in the economics of reli gion explored the

incentives that individ uals might have to hold religious beliefs (Ekelund, Hébert, and Tollison 2002), more recent research is focused quite heavily on the socioeconomic consequences of religion, using economic theory and sophisticated sta tistical tools. As new data both historical and contemporary has become available, con cern with identification of religiosity effects has become more pronounced. This survey provides a selective, critical review of the literature and I focus mainly on research conducted by economists in the economics of religion. A difficult issue here is drawing a boundary between more general social science research on religion and the work done by economists, because frequently these boundaries intersect. Therefore I have also included the work of noneconomists, notably sociologists and political scientists, that use economists' tools and methods or that address the questions that economists ask. As many ideas in the economics of reli gion today owe their origins to other disci plines, it is important to give due precedence to ideas that have come into economics from these related social science domains. In the first section, I discuss definitions of religion, the historical and sociological roots of the economics of religion that first raised three hundred years ago many of the themes we are still investigating today, and a snap shot of global religiosity. This sets the stage to examine a number of themes that currently interest economists of religion including This content downloaded from 70.150.177.5 on Wed, 07 Jul 2021 18:32:46 UTC All use subject to https://about.jstor.org/terms secularization, pluralism, regulation, reli gious competition, club goods models, char itable giving, religious sendee provision, and other themes. I also discuss the evo their lives or supporting them either socially or psychologically. Glock and Stark (1965) define it this way: "Religion, or what societ ies hold to be sacred, comprises an institu lution of ideas in broadly chronological tionalised system of symbols, beliefs, values, order in which they have influenced the evolution of this field. Consequently, and practices focused on questions of ulti mate meaning" (p. 4). Of course, there are this survey is divided into six sections very famous textbook definitions including (1) Historical Background and Global Dürkheims definition of religion: "A reli Religiosity; (2) Secularization, Pluralism, gion is a unified system of beliefs and prac Regulation, and Economic Growth; tices relative to sacred things, that is to say, (3) Religious Markets, Club Goods, Differentiated Products, and Networks; (4) Identification, Secular Competition, and Charitable Giving; (5) Conflict and Cooperation in Developing Societies; and things set apart and forbidden - beliefs and practices which unite into one single moral community called a Church, all those who adhere to them" (Durkheim 1912). Probing the economic concern with (6) Unanswered Questions for Future religion is not restricted to scholars of the Research in the Economics of Religion. 2. Histońcal Background and Global Religiosity twenty-first century. Adam Smith first made reference to the church and competition between religions in The Wealth of Nations The economics of

religion as a subfield is relatively new, but the study of religion itself and in The Theory of Moral Sentiments .3 Smith discusses three concepts that econ omists of religion still debate - the role of competition, religious institutions includ is ancient - many other disciplines, notably ing service provision, and religious plu philosophy, theology, history, anthropology, and sociology have had much to say about ralism (Anderson 1988).4 As Smith saw it, competition was about an individual buyer or seller raising or lowering their prices in religion and religious beliefs. For econo response to conditions prevailing in the mists, definitions are central to the process market, largely independent of any notion of modeling. There are many different defi nitions of religion; some are substantive of market structure.5 By the time Adam and others are functional, so among schol ars there is no commonly accepted defini tion of religion. Substantive definitions of 3 Alfred Marshall's The Pṅnciples of Economics high lights the fundamental role of religion in molding both an religion concern investigating religion as individual's motivations and the course of world history (see Marshall 1890, p. 1). Religion also features in Joseph a philosophy or as a system of beliefs, and Schumpeter's History of Economic Analysis (1954). using this to try to understand the world. For example, in his 1928 book The Religion We 4 But interpretations of how Adam Smith saw religion are often varied among historians of economic thought: for example, Emma Rothschild (1994), in her interpretation Need , the distinguished Indian philosopher of how Adam Smith viewed the invisible hand, also argues Sarvepalli Radhakrishnan wrote that religion that Smith was critical of established religion in most of his "is an expression of the spiritual experience work. She contends that "Smith's comments on religion, of a race, a record of its social evolution, like Hume's, are often ironical, and also highly conscious of an integral element of the society in which pious public opinion" (Rothschild 1994, p. 321). 5 As Anderson writes, "Smith viewed participation in it is found" (Radhakrishnan 1928, p. 25). Functional definitions focus on what reli religion as a rational device by which individuals enhanced the value of their human capital" (Anderson 1988, p. 1066). They could then choose both their degree of belief and gion does for people in terms of its role in their degree of participation in religion. This content downloaded from 70.150.177.5 on Wed, 07 Jul 2021 18:32:46 UTC All use subject to https://about.jstor.org/terms Iyer: The New Economics of Religion 399 Smith wrote about competition, it was a that a monopoly religious organization could very familiar concept in the tradition of undermine a state. This has implications economics writing at the time. His main for state repression of religion, the debates contribution lies in using this concept to about international religious freedom, and understand behavior and as a way of orga nizing society. Smiths arguments are rele vant to understanding both contemporary religious violence and the balance between publicly and voluntarily provided services by religious organizations, such as primary the relation between the church and the state, a theme I return to in section 2.7 Away from economics, in the nineteenth century, social

scientists wrote much about schooling and poor relief (Mochrie 2014). religion, including in related fields such as psychology, sociology, and anthropology.8 In the twentieth century, there was much These themes recur in more contemporary less written about religion. Glock and Stark studies, as discussed in section 5 below. quote Gordon W. Allport who wrote that the Friedman (2011) argues that the evolution "subject of religion seems to have gone into of economics as we know it today was influ hiding" (Glock and Stark 1965, p. x). This enced profoundly by changes in religious all changed with World War II, when much beliefs in the times in which Adam Smith lived. As he contends, "Further, those more began to be written about religion in other social sciences exploring themes such at-the-outset influences of religious think ing not only fostered the subsequent spread as religious commitment and the beginnings of religious competition (Greeley 1962). of Smithian thinking, especially in America, but shaped the course of its reception. The Sociologists were the first to study modern religion and religious organizations using the ultimate result was a variety of fundamental resonances between economic thinking and religious thinking that continue to influence 6 The view of religion supported by the state and get ting benefits from a monopolistic state-supported structure our public discussion of economic issues, of religion is also found in work of sociologists like Peter Berger (1967). and our public debate over economic pol icy, today" (Friedman 2011, p. 166). Contemporary themes discussed in sec tion 2 about the value of religious plural 7 A century later, although himself famous for speak ing first of "the wall of separation between church and state" Thomas Jefferson wrote about religion in a letter from Monticello on September 1, 1820, thus: "It excites in him the gratifying reflection that his country has been ism, the relationship between pluralism and religious participation, and the role the first to prove to the world two truths, the most salutary to human society, that man can govern himself, and that of the church and the state, is exemplified religious freedom is the most effectual anodyne against religious dissension: the maxim of civil government being in the debate between Adam Smith and David Hume. Hume argued for the state reversed in that of religion, where its true form is 'divided we stand, united, we faU.'" This point of view of Jefferson is very similar to the Adam Smith view of religious compe sponsorship of one unique religion and also highlighted rent seeking within religious tition and freedom, but the importance of religious free dom extends also to the kind of religion that it espouses, for organizations, and the relationship between example, religions themselves may be more tolerant and moderate in societies that encourage religious competition. religion and politics that led to civil disorder (Mochrie 2014). In contrast, Adam Smith 8 For example, Sigmund Freud's views on religion are contained in his book The Future of an Illusion (1927), in argued that religious competition is ulti which he thinks of religion as an irrational response to fam mately good for the consumers of religion ily influences, especially the reassuring need for parental protection, and the power of nature before which man is and for the nature of the

religious product aware of his own inconsequence and the inevitability of itself because it reduces the capacity of reli death. Freud goes so far as to argue that religion is linked gious organizations to extract rents, caused by poor governance. Smith was concerned to the repression of an Oedipus complex by highlighting instead the fathers role. Freud thus regarded religion as a sort of collective neurosis. This content downloaded from 70.150.177.5 on Wed, 07 Jul 2021 18:32:46 UTC All use subject to https://about.jstor.org/terms analogy of firm behavior, focusing on concepts such as competition (Stark and Bainbridge 1987), and this is first found in the work of the sociologist Peter Berger (1963, 1967).9 This initial notion was developed much fur ther in the seminal works of Roger Finke and Rodney Stark, who developed the thesis into the "religious economies" argument (Finke and Stark 1992). Based on their analysis of religious markets in the United States, Finke and Stark are some of the early scholars who made very important contributions in this area. Their focus was on questions such as the movement from sects to churches, the formation of cults as well as schisms, and renewal movements.10 The main themes in this research are the idea of religious compe tition, religious regulation, and new religious movements. In the same tradition, Warner (1993) articulated that a new paradigm had emerged for the sociological study of reli gion in which he argued that in the United States, organized religion flourished in an open market. What motivated this para digm was the empirical observation that in the United States in the nineteenth century and the first half of the twentieth century, "societal modernization went hand in hand with religious mobilization" (Warner 1993, p. 1049). Religion in the United States was for religion was viewed increasingly as veiy competitive. One of the classic papers written on the economics of religion, Azzi and Ehrenberg (1975), summarized the literature on what the empirical correlates of religiosity had discovered about the United States until then. Some of these trends are still visible, although we now have data on a broad set of countries. At the time, these trends were that women participated more in church-re lated activities than men;11 that church attendance increases with age; that there are only weak relationships between income and church attendance, with it usually being pos itive or backward bending, so that it is high est for those with middle incomes. Racial differences were also observed with African Americans attending church more than whites; and church attendance was found to be higher in rural than in urban areas (Azzi and Ehrenberg 1975, p. 32). Contemporary studies of the United States show the con tinued importance and practice of religion (Putnam and Campbell 2010). Contemporary research studies are aided greatly by the availability of much better data than we have ever had on religion pre viously (Finke 2013). In empirical work, religion is conventionally measured either thus distinct from religion in other parts of in terms of religious beliefs, such as prayer the world, particularly the older paradigm of European secularization, and the market 9 The notion of competition here is an individual buyer or

seller raising or lowering his or her prices in response to conditions prevailing in the market. lu5ome dehnitions may be userul here: churches and "sects" are both religious institutions, but the former depict less tension with the wider world than the latter. As Stark and Finke argue, "Tension consists of differences in norms and values and refers to the degree of distinctiveness, separation, and antagonism in the relationship between a religious group and the "outside" world. Put another way, the higher the tension between a religious group and its surroundings the more costly it is to belong ." (emphasis in original, Stark and Finke 2002, p. 35). and other indicators of "believing," or alter natively in terms of religious participation and attendance such as church going, which are indicators of "belonging." These indica tors have been widened now to include data on religious regulations and persecution, which incorporates international regulation and violence indices, a research agenda that 11 Although women participate more in church-related activities in the United States, in the Islamic world men participate much more in religion-related activities. In some countries, women going to mosques is much more restricted, except in back rows, or upstairs. They are also not required to participate in Friday congregational prayers. This content downloaded from 70.150.177.5 on Wed, 07 Jul 2021 18:32:46 UTC All use subject to https://about.jstor.org/terms Iyer: The New Economics of Religion 401 has flourished since 2000 (Grim and Finke in some countries, such as Saudi Arabia, it is 2006). These are used in many studies of not possible to be unaffiliated by law, and in religion and the creation of these indices is of fundamental importance to future work others it is not possible in practice because of social pressures. Equally, in countries that on the economics of religion. are officially atheist, the number of unaffil Since the 1700s, scholars and writers from iated may be exaggerated because religious Galileo and Voltaire to Mark Twain have people may falsify their religious preferences forecast the extinction of religion in general to appear irreligious in public (Kuran 1995). or some faiths in particular. Yet with all its For similar reasons, in places where the consequences, positive and negative, religion devout dominate, the percentage of practic continues enduringly to persist. Moreover, faiths once considered on their way to ing or sincerely believing adherents may also be inflated. extinction have grown in numbers of adher ents and in global significance. The Global The geographic distribution of religious groups varies considerably (Pew Forum on Religious Landscape Study showed that a Religion and Public Life 2012). Many are large majority of the worlds population con concentrated in the Asia-Pacific region, tinues to be religious by various measures especially those who are Hindu, Buddhist, (Pew Forum on Religion and Public Life 2012). This comprehensive demographic folk or traditional religions, and other world religions.12 Large numbers of the religiously study of more than 230 countries and terri unaffiliated live in China. The Asia-Pacific tories estimated that more than 5.8 billion adults and children are religiously affiliated around the globe, representing 84 percent of the 2010 world population of 6.9 billion. The study

analyzed 2,500 censuses, surveys, and population registers. As shown in figure 1, the study showed that the worlds major religious groups in 2010 were Christians (32 percent), Muslims (23 percent), Hindus (15 percent), Buddhists (7 percent), and Jews (0.2 percent). As many as 16 percent of respondents have no formal reported religious affiliation (although they may have spiritual beliefs or beliefs in a higher power), which makes them the third largest group in their sample. These findings are also consis tent with other scholarly work in the sociol ogy of religion that has documented the rise of the "nones" in the United States (see Hout and Fischer 2002; Hout, Fischer, and Chaves 2013). Hout, Fischer, and Chaves (2013) show that in 2012, 20 percent of Americans reported no religious affiliation, a trend that has increased since 1990 (Hout, Fischer, and Chaves 2013). The share of the unaffiliated group probably forms a lower bound because also hosts most of the worlds Muslims, who also populate the Middle East, North Africa, and sub-Saharan Africa. The Christians are relatively equally distributed in Europe, Latin America, and sub-Saharan Africa. The Jews live mainly in North America and Israel.13 3. Secularization, Pluralism, Regulation, and Economic Growth One set of ideas in the economics of reli gion literature concerns the secularization hypothesis, which predicts how pervasive 12 The folk religions include African traditional reli gions, Chinese folk religions, Native American religions, and Australian aboriginal religions. The other world reli gions include the Baha'i faith, Taoism, Jainism, Sikhism, Shintoism, Tenrikyo, Wicca, and Zoroastrianism, which are not always included in country censuses. 13 The age distribution of the population also shows that those religions concentrated in China or Western coun tries have older populations. The median age for Muslims and Hindus at twenty-three years and twenty-six years, respectively, is much lower than the median age for the worlds population overall, which is twenty-eight years, or for Jews, which is thirty-six years (Pew Forum on Religion and Public Life 2012, p. 13). This content downloaded from 70.150.177.5 on Wed, 07 Jul 2021 18:32:46 UTC All use subject to https://about.jstor.org/terms Figure 1. Size of Major Religious Groups in 2010, Percentage of the Global Population Notes: * Includes followers of African traditional religions, Chinese folk religions, Native American religions, and Australian aboriginal religions. ** Includes Bahai's, Jains, Sikhs, Shintoists, Taoists, followers of Tenrikyo, Wiccans, Zoroastrians, and many other faiths. Percentage may not add to 100 due to rounding. Source: Pew Research Centers Forum on Religion and Public Life - Global Religious Landscape, December, 2012. religion is as countries become richer. The main theme of this work is that economic development by increasing education and urbanization leads to decreased religiosity, and the role of organized religion is mini mized with development.14 This is related to debates about religious pluralism and partic ipation, as well as state regulation of religion. This section also evaluates the relationship 14 See Norris and Inglehart (2004) for carefully pre sented evidence using World Values Survey

data to test the secularization thesis. They conclude that "rich societies are becoming more secular but the world as a whole is becom ing more religious" (emphasis in the original, Norris and Inglehart 2004, p. 217). between religion and growth the other way round, examining the influence of religion on economic growth through cross-country studies. Among other economists, Jacob Viner (1978) wrote about secularization.15 In his 1966 Jayne Lectures, Viner defined secu larization as "a lessening of the influence on ethical and economic thought of eccle siastical authority and traditional church creeds, and a shifting of weight from dogma 15 Viner s unpublished work was edited posthumously by Jacques Melitz and Donald Winch and reproduced in Oslington (2003). This content downloaded from 70.150.177.5 on Wed, 07 Jul 2021 18:32:46 UTC All use subject to https://about.jstor.org/terms Iyer: The New Economics of Religion 403 and revelation and other-worldliness to reason and sentiment and considerations to the supply of religious institutions such as of temporal welfare" (Viner as quoted in churches, and these are also correlated with nonlinearities in population size and density Oslington 2003, p. 159). The secularization hypothesis was largely accepted by sociolo (Olson 2011). A related question in these secularizа gists until the work of Iannacconne, Finke, tion debates is whether religious pluralism and Stark, and others. Their work suggested per se decreases religious participation or that rather than focusing only on the demand not (McBride 2008; Montgomery 2003; side, which the secularization hypothesis epitomized, it is also crucial to examine the supply side. It is to be acknowledged that Voas, Crockett, and Olson 2002). For many decades, sociologists argued that pluralism reduces religious activity and is associated many of the studies of secularization have with the secularization hypothesis. Finke and been based primarily on US data. Stark (1988) argued the reverse - that plu The work by Barro and McCleary ralism increases church membership. Other attempted to reinstate the secularization evidence from the United States also showed hypothesis. Barro and McCleary (2003) find that economic development, mea that pluralism was associated with increased church attendance (Warner 1993). Pluralism sured by increases in the standard of liv ing, causes small declines both in religious participation and beliefs. Yet, the effect is ambiguous, because although people in rich countries might spend less time devoted to is measured by the population percentage that is affiliated with a particular religious denomination. However, the evidence on pluralism is limited by the statistical methods used to calculate its effects; for example one religion than in poor countries, this is coun study shows that correlations between mea terbalanced by greater money contribution sures of pluralism like a Herfindahl index geared towards organized religion (Barro and religious participation are a function of and McCleary 2005, p. 1348). The European the data and statistical methods used to cal experience, in terms of low religious partic culate these measures (Voas, Crockett, and ipation, is also explained by regulations that deter new religious entrants rather than Olson 2002). McBride (2008) and Montgomery

(2003) explanations that rely on demand-side issues, use the literature from industrial organiza while the high levels of participation in the United States are often attributed to more competitive religious markets (Finke and Stark 1992). The work on secularization was supported by other research on Europe that suggested that the decrease in religious attendance in Europe was not only due to fewer religious "suppliers," but that there was a genuine fall in the demand for religion (Voas 2007). However, as Olson (2011) points out, distin guishing the demand-side influences from the supply-side influences is difficult to do empirically, as they might be related to each other, mainly because religious participa tion data that measures demand is related tion and product differentiation to exam ine the relationship between pluralism and participation. Using a Hotelling location model of product differentiation, McBride examines the equilibria of the model to show how pluralism and participation arise out of religious demand and supply, illus trating that correlations exist between plu ralism and participation, which does not say anything about causality. He shows that participation and pluralism are caused by unregulated entry into religious markets, the low costs of providing religious services, and religious preferences. His model demon strates that population growth may increase pluralism; that the relationship between This content downloaded from 70.150.177.5 on Wed, 07 Jul 2021 18:32:46 UTC All use subject to https://about.jstor.org/terms religious demand and population size mat ters depending upon the level of the data used to investigate this relationship; and that religious regulations decrease pluralism but secular regulations may encourage religious participation. Montgomery (2003), while in general being critical of models of this type, puts forward a new measure of religious competition that is a partial order on the set of religious markets so that, for instance, one religious market A is considered to be more competitive than the other B if the denom inations set in A includes the set of denom inations in B. Given this partial order of competition measure, Montgomery's model shows that markets that are more compet itive have higher religious participation, although depicting this with US historical data demonstrates a negative relationship.16 He also shows that there is a relationship between religious competition and the size of the population, so that larger markets are more competitive than smaller markets. This is because larger markets can support a larger range of religious options, and hence demonstrate greater participation. Also, if there are new denomination entrants into the religious market, this may cause incum bent denominations to increase their level of effort. On the empirical side, Hungerman (2013) also suggests that predictions from some of the location models may not always fit the data in all settings. Taking the secularization hypothesis and religious competition further formally, either when it is very secularized or when it is highly religious. Economic growth affects religious demand and hence participation, but also supply, as it can decrease the costs of service provision through

advertising, better monitoring of the faithful, and so forth, which can increase rather than decrease pluralism. McBride highlights the role of religious mar ket structure so that a monopoly denomina tion may lower its strictness to become more secularized. Moreover, restricting secular substitutes will increase the demand for reli gion, but the effect of prohibiting new entry is more complicated. If it is combined with secular restrictions, then there could still be high religiosity. If secular substitutes are not restricted, then the outcome will depend on how incumbent groups react. One of the interesting predictions of the model is that higher income inequality might cause more strict religious groups. So, religious compe tition on the demand side and on the supply side may lead to the increasing strength of religion, even if secularization occurs, if the religious market is more open rather than more regulated. This has implications for whether regula tion of religious organizations is necessary. One theme in this largely empirical litera ture is whether or not state religions and a monopolistic structure matters for the free dom of markets (Barro and McCleary 2003; Stark and Finke 2000; Barro and McCleary 2005; North and Gwin 2004; Gruber 2005; McBride (2010) examines specifically why Gruber and Hungerman 2008). One concern is whether deregulation or lack of regula "economic growth has not led to a decline in religion despite past predictions that it would" (p. 148). He shows that growth has little effect on a market at the extremes, i.e., 16 McBride s (2008) analysis implies that Montgomery's approach may be looking at only one side of the market, tion of religious organizations is imperative (Hungerman 2011). Examining a large sam ple of 188 independent countries of which 40 percent had a state religion, Barro and McCleary (2005) and McCleary and Barro (2006) showed that if a country had a state religion, for given regulation, it provided since by measuring competition by the observed diversity subsidies to organized religion, and that of the market, this may ignore demand-side characteristics. This probably explains the finding that there is more com petition in larger markets. this affected economic growth. State reli gions also reflect in higher adherence rates, This content downloaded from 70.150.177.5 on Wed, 07 Jul 2021 18:32:46 UTC All use subject to https://about.jstor.org/terms Iyer: The New Economics of Religion 405 a nonlinear effect with population, and per capita GDP has little effect. They also argue for secularization (Becker and Woessman 2013; Cesur and Mocan 2014; Gulesci that state religions are persistent for countries and Meyersson 2013; Hungerman 2014a). in which there is no major regime change so Hence, the literature has examined the sec that if a state religion existed in 1900, it was much more likely to do so many decades later ularization hypothesis empirically, as well as the relationship between religious pluralism, in 1970 or 2000. McCleary and Barro (2006) religious participation, and the role of state show that on the one hand, if state subsidies to religion are provided, then this might religions. There seems to be some evidence for the secularization hypothesis, although increase the demand for religion and reli whether it is driven by demand-side or gious participation; on the other

hand, state supply-side changes in religious markets is regulation decreases religious participation subject to debate. because it affects the supply of religion. In Other econometric studies of religion the context of state religions, a wide-ranging study by North and Gwin (2014) develops a examine the relationship between religion and income the other way round, i.e., they model of how a government may establish or disestablish a state church, and then tests the cast light on whether religion has any effect at all on economic growth and performance model on a panel dataset of western coun across countries (Noland 2005). Barro and tries over a sixty-five-year period. They con McCleary (2003) examine the effects of reli firm that state religions mostly take hold in gious participation and beliefs on a country's countries with homogenous populations, a rate of economic growth. They conclude that state religion reduces the overall religiosity of a population in religiously heterogeneous populations, and religious freedom increases both attendance and pluralism. believing matters more than belonging, so that for a given level of church attendance, increases in some religious beliefs - nota bly belief in heaven, hell, and an after Secularization research is also moving life - tends to increase economic growth. into more micro-level empirical studies. For example, Buser (2014) examines the effect Economic growth is also affected negatively by church attendance. They show this using of income on religiosity in Ecuador. He uses an exogenous source of income variation - a instrumental variable analysis where the change in the eligibility criteria for a govern instruments include the presence of a state religion, religious adherence, and an indica ment cash transfer program in Ecuador - in order to estimate a causal effect of income on religiosity using a regression discontinu ity approach that deals with the identifica tion issues (discussed further in section 4, below). The Ecuadorian study demonstrates that households with higher incomes have higher church attendance, and are also more likely to be members of Evangelical churches than the more widespread Catholic churches in Ecuador. Moreover, while most of the debates about secularization tor for religious pluralism. The underlying model behind their work is that religious beliefs affect individual traits that support economic progress. Their work is important in the context of the secularization hypoth esis because they present the alternative "religion-market" model, namely that greater religious diversity promotes greater competi tion between religions, which leads to better services provided, which leads to enhanced participation and beliefs, also influenced by the ability of the state to regulate religious concern income, there are several papers that examine secularization and education, organizations. The influence of the state can work in two ways - either by greater subsi rather than income, and which find evidence dies to religious organizations, the state can This content downloaded from 70.150.177.5 on Wed, 07 Jul 2021 18:32:46 UTC All use subject to https://about.jstor.org/terms increase adherents because better facilities are now better provided. Alternatively, if it is assumed that the state regulates religious organizations by

promoting monopoly such as, for example, with very established state religions, then this reduces their ability to be as efficient in their operations, and separately from the effect of other fac tors, notably geography, other institutions, and ethnic fractionalization, which are also important growth determinants. Different results are obtained at the cross-country versus intracountry levels. This is especially true of religion, because diversity may lead hence may lead to lower religious participa tion rates. So the effects of a state religion becomes an empirical question and in their study, they do find evidence that govern ment regulation of religion decreases church attendance; although state religion and state regulation together show a very mildly posi tive effect on attendance. In general, the cross-country regression-based studies are interesting, but not without their limitations. Some of them have statistical difficulties such as, for exam ple, those outlined by Voas, Crockett, and Olson (2002). Durlauf et al. (2012) demon strate the sensitivity of results to instrument choices in such analyses. Durlauf et al. (2012) show that when model-averaging methods are used, there is very little evidence that religion-related variables do in fact predict cross-country differences in income. Durlauf et al. (2012) find that the work of Barro and McCleary (2003) demonstrating an effect of religion on growth is statistically replica ble, but not statistically robust. Arguing that "God is not in the details," they find no evi dence for the effect of religious beliefs on growth once they control for model uncer tainty, although they do find weak evidence for the effect of religious participation on growth (Durlauf et al. 2012, p. 1060). Cross-country regressions have been the main staple of the macroeconomics of reli gion since the early days of research in the economics of religion, and the collective set of results from such studies do need to be evaluated critically. Cross-country studies typically use different econometric formula tions. A problem is that it is often difficult to evaluate the effects of religion on growth to higher religiosity at the country level, where individuals may move to join commu nities of their same faith, but be detrimental to religiosity within smaller areas, such as the subcountry level where the diversity of beliefs weakens the theological grip of any worldview and leads to lower religiosity, as some studies have shown. Perhaps echoing the historical debates, the evidence foretells that Adam Smith was probably correct about religion at the macro or national level, while David Hume assessed religion better at the micro or community level. 3.1 The Protestant Ethic , Human Capital , and Democracy The economics of religion today is influ enced by Max Weber s thesis, which discusses the effect of the Protestant ethic on capital ism (Weber 1904). As Iannaccone reminds us in his 1998 review, "Over the past cen tury, scholars have made many claims about the economic consequences of religion, but none grander than those associated with Max Webers The Protestant Ethic and the Spirit of Capitalism ' (Iannaccone 1998, p. 1474). The central thesis of Weber s writing is that there are certain theological aspects of the Protestant doctrine such as "predestination," "election," "calling," and success in business that were seen as contributing to salvation,

generating a set of economic attitudes which were the spirit of capitalism. The core of the Weber argument, which describes the interplay between faith and human action, is described by McCleary (2011a) thus: "God demanded of each person a lifetime of works that were ordered by morality. The believ ers actions in the world originate in God

Iyer: The New Economics of Religion 407 grace; this faith in turn justifies itself by the moral quality of the action. The quality of the discourse among economists at least, there has been a renewed interest in revisiting action, Christian conduct, was defined by a rational system of morality and became the standard by which to measure the glory of God. Thus, salvation by work (daily work, the Weber hypothesis both theoretically and empirically (Cavalcanti, Parente, and Zhao 2007; Basten and Betz 2013). Part of the reason this theory is interesting to econ not ascetic activities of monastic communi ties) was organized and rationally justified in an impartial moral system that applied to the activities of one s daily life and logically led to the rational organization of labor" (McCleary 2011a, p. 4). Thus, Protestantism directly contributed to the rise of modern capital ism by altering it in specific ways. In turn, as Landes (1998) and others have argued, the causality could also have gone the other way so that secular ideas occasioned by capitalist development may have led to less religious attendance as, for example, in Northwest Europe. There are also other critiques of the Weber thesis based on the view that the capi talist spirit predates the Reformation (Tawny 1926; Gorski 2005). Sociologists have extensively evaluated Webers thesis (see, for example, Lenski 1961). Among economists, many have been interested in it. For example, Jacob Viner (1978) discussed the Weber hypothesis in one of five chapters on religion that were edited and published posthumously. Viner points out that Weber himself freely acknowl edged that there were many predecessors to his writings who remarked on a close his torical association between Protestantism omists is because, empirically, economic development in northern Europe could be explained by developments that were asso ciated with Protestantism - e.g., the con cern with savings, entrepreneurial activity, the frugality that Puritanism demanded, and the literacy needed to read the scrip tures. Since spiritual grace from religion is attained by demonstrating temporal success in one s calling through diligence, discipline, self-denial, and thrift, the Protestant ethic promoted a work ethic that increased sav ings, capital accumulation, entrepreneurial activity, and investment. An important side effect is that it also encouraged human capi tal formation and literacy, all of which might have contributed to economic growth in this period. Many empirical studies have sought to establish if these economic relationships are found in

historical or contemporary data, both from Europe and elsewhere. In macroeconomic work, Guiso, Sapienza, and Zingales (2003) revisit the Weber hypothesis to examine the effect of religion on individuals' economic attitudes, rather than looking at outcomes. Using World Values Survey data between 1981 and 1997, they showed that religious beliefs were asso and capitalism. However, an important, and ciated with economic attitudes conducive to often overlooked point in the discussions economic progress as measured by attitudes of Weber - and it is a nuanced observation by Viner on Weber - is that while previous studies hinted at a "correlation," to use the language of modern economics, Weber may have been the first to attribute "causality" to the Protestant ethic. In Iannaccones 1998 review paper, he pointed out that the most noteworthy aspect of the Protestant ethic thesis was the lack of empirical support for it. In more recent towards cooperation, government, women, legal rules, thrift, and the market economy, with different effects across religions, con trolling for country fixed effects and individ ual characteristics. They also used religious upbringing to identify the effect of religion independently of individual characteristics, and by examining attitudes they are able to identify the effect of religion on prefer ences. In examining attitudes, they found This content downloaded from 70.150.177.5 on Wed, 07 Jul 2021 18:32:46 UTC All use subject to https://about.jstor.org/terms that religious people were more trusting, trusted others and governments more, and believed more that markets are fair, com pared to those who were less religious. They also found that religious people in this sam ple were less sympathetic to women's rights and more intolerant. They also found that trust was associated with participation while intolerance was associated with religious upbringing. Bénabou and Tiróle (2006) dis cuss theoretically the links between having more religious populations, high work effort, and its implications for low taxes and redis tribution. An effort to test the Weber work ethic hypothesis is Basten and Betz (2013), who investigate if Protestantism has effects on the preferences for leisure, redistribution, and state intervention in Switzerland. Using a fuzzy regression discontinuity design, they examine a historical experiment in which two parts of Switzerland in the sixteenth cen tury adopted different religions, Reformed Protestantism and Roman Catholicism. every town to have a school, and these authors look at the share of Protestants in a county compared to Catholics and find that literacy in all-Protestant counties was 7-12 percent higher than in all-Catholic counties. To identify causality in the face of the poten tial endogeneity of Protestantism and liter acy, they also use "distance to Wittenberg" in Prussia (the place from which the Reformation began) as their instrumental variable for Protestantism, on the basis that those further away were less likely to adopt Protestantism, to test for the effect on lit eracy, which they find is very significant. Consequently, this human-capital explana tion may provide an alternative theory for Webers hypothesis. As shown in their work, girls benefited especially from the Protestant

emphasis on education, reducing consider ably the gender gap in education, and even tually fertility as well (Becker, Cinnirella, and Woessmann 2010). Relatedly, Jared Rubin (2014) explores Subsequently using data from 1980 onwards, econometrically whether the initial spread they find that in those municipalities that of the Protestant Reformation was associ were completely Reformed Protestant, support for leisure and redistribution was ated with the spread of the printing press because it allowed the ideas engendered by greater, and support for intervention lower, than in Roman Catholic municipalities. the Reformation to spread to a much wider audience. Examining city-level data on con A renewed interest in revisiting the Weber hypothesis using historical data version to Protestantism and other factors within the Holy Roman Empire, he shows has also prompted alternative explana that cities with a printing press by 1500 were tions for economic growth. An import 29 percent more likely to be Protestant by ant side-effect of Protestantism is that it 1600 (Rubin 2014). 17 In keeping with studies encouraged human-capital formation and that use distance indicators as instrumental literacy. Becker and Woessmann (2009) variables to deal with potential endogene propose that rather than a work-ethic argu ity, Rubin instruments for printing presses ment, the human-capital explanation is a with the "distance from Mainz," which more plausible reason for Webers theory. They argue that Protestants in late-nine was the birthplace of printing in 1450. His results are robust even when using a mea teenth-century Prussia had higher human sure of the intensity of printing, as measured capital, which increased their productiv by the number of books written in German ity and hence economic growth for coun tries dominated by them. Martin Luthers Reformation had unintended consequences with respect to education, as he encouraged 17The Holy Roman Empire comprises modern Germany, Belgium, Switzerland, Netherlands, Austria, France, Poland, and the Czech Republic (Rubin 2014). This content downloaded from 70.150.177.5 on Wed, 07 Jul 2021 18:32:46 UTC All use subject to https://about.jstor.org/terms Iyer: The New Economics of Religion 409 between 1450 and 1600 and printed in a city, rather than only by the existence of a democracy, such as the literacy necessary to read the scriptures. More interestingly, printing press. Again he finds that cities with greater intensity of printing were more likely he finds that the historical prevalence of to adopt Protestantism. So there seems to be Protestant missionaries predicts democracy, although Catholic missionaries do not do so. some evidence that a more human-capital He also argues that this is because missionary based explanation of Webers theory has organizations in the nineteenth century in the some empirical support in the literature. United States were larger in terms of their The role of Protestantism is also relevant in the context of research on missionary activity (Woodberry 2011; 2012). This work locates the study of Protestantism in the con text of the broader role of institutions that affect macroeconomic growth (Acemoglu, Johnson, and Robinson 2001). In a masterly paper, Robert Woodberry (2012) relates mis sionary activity

to the formation of democratic institutions. He argues that "conversionaiy Protestants" influenced the development of democracy around the world because they espoused particular things that spurred democracy, including liberty, education, printing, newspapers, voluntary organiza tions, and reforms associated with colonial ism, creating preconditions for the success of democratic institutions. Religious, moral, and cultural factors shape moral behavior as he writes, "Many of the major histori cal and statistical arguments about the rise and spread of democracy collapse when we account for religious factors in a historically sensitive way" (Woodberry 2012, p. 244). Based on a sample of 142 countries, he shows that Protestant missions explain about half the variation in democracy in Africa, Asia, Latin America, and Oceania, and that their inclusion in standard growth regres sions makes variables that are popularly used in these regressions insignificant. He argues that there are omitted variables that might drive the relationship between Protestantism and the factors that are ascribed to helping democracy. Encouraging people to read the Bible in their own language and allowing the religious laity to be more involved with religion encouraged factors that prompted size and access to financial resources than most labor unions, NGOs, and banks, with the exception of some very large commercial banks (Woodberiy 2012, p. 247). Especially outside Europe, religion influenced both whether countries went in for printing and whether printing led to the development of mass literacy through the publication of newspapers.18 In cross-national statistical analysis, he shows that the existence of these missions affected printing, education, devel opment, rule of law, corruption, and espe cially democracy. In summary, the literature has some support for the Weber hypothesis, but also for other explanations including human-capital-based theories, which may be linked to the formation of democratic insti tutions around the world. 4. Religious Markets , Club Goods , Differentiated Products , and Networks While some studies in the economics of religion consider the role of religion on mac roeconomic growth, others focus on devel oping insights from microeconomics. As Iannaccone pointed out in his 1998 review, while the Azzi-Ehrenberg model was the first formal model of religious participation, 18 Woodberry writes of India: "For example, within 32 years of importing a press to India in 1800, three British missionaries printed more than 212,000 copies of books in 40 languages and, along with other missionaries, created the fonts and paper that dominated South Asian printing for much of the nineteenth century" (Woodberry 2012, p. 250). He also points out that this spurred the Hindus and Muslims to respond, often with religious books that arose in competition. This content downloaded from 70.150.177.5 on Wed, 07 Jul 2021 18:32:46 UTC All use subject to https://about.jstor.org/terms and the basis of almost all subsequent eco nomic models in this area, the models that came later highlighted a host of other pay offs to religion incorporating the collective dimensions of identity, social support, and mutual aid (Iannaccone 1998, pp. 1480-81). The

microeconomic approach has brought many key insights to the study of religion. First, it has highlighted the value of thinking about religion in terms of club goods models, religious markets, and differentiated prod ucts in such markets. Second, it has high lighted a role for spatial competition models from industrial organization, and for reli gious networks. Third, new research in this area is testing economic theories of religion in laboratory and field experiments. In thinking about religion as an industry or beliefs as a product, it is clear that religion usu ally has entry costs, and that it competes with other religions (Jelen 2002). As with other products, we can learn about the characteris tics of religious goods and how different they are from each other and other products that compete with them. The literature has been concerned with evaluating secular substi tutes to religion and philanthropy by religious organizations. Economics has also been use ful for thinking about the evolution of con gregations and denominations, theoretically and empirically in different institutional con texts. Economists and other social scientists have been proactive in exploring the rational choice approach to understanding religion, but also to understanding how religious com petition matters (Becker and Murphy 2000; Montgomery 2003; Putnam and Campbell 2010; Iannaccone and Berman 2008; Bisin and Verdier 2000; Prummer and Siedlarek 2014). This view also examines "spiri tual capital" - or religious capital - which embodies the norms and networks organized on the basis of religion. The rational choice approach to the study of religion is found in the work of many economists and sociologists (Azzi and Ehrenberg 1975; Iannaccone 1992, 1998; Montgomery 1996; Stark, Iannaccone, and Finke 1996; Stark and Finke 2000; Berman 2000). In this approach, individuals are rational consumers of religion who decide whether or not to believe, or in which reli gion to believe, based on a cost-benefit anal ysis and relative to their initial endowments. In this view, people adopt religion because it is optimal for them to do so and their beliefs and activities may change over time. In a sim ilar way, the supply of religion is explained by churches behaving similarly to clubs or firms in a competitive market, and especially pro viding services to attract potential custom ers. One methodological concern for these economic rational choice theories of religion and religious competition is the nature of the objective function and the possibility of mul tiple equilibria: As Hungerman writes, econ omists need to decide, "what a congregation s objective function is. Do congregations max imize members, donations, or some ethereal concept of 'religiosityP'^Hungerman 2011, p. 259; see also Eswaran 2011; Montgomery 2003). The first formal model of consumer choice in religious markets was that developed by Azzi and Ehrenberg (1975). The paper exam ined household time allocation and church attendance by developing a multiperiod util ity-maximizing model of household behavior including the household s life-cycle religious participation profile. It argued that the rela tive differences in wages between men and women, and consequently their different opportunity costs of time, could explain their differential involvement in religious activi ties. The argument here

was that as wages increased, less time would be devoted to religious participation. They also extended the model in several ways and tested their theory on church membership and church attendance data from the United States. One of the key assumptions of the model is that there are benefits in the afterlife to reli gious participation - unlike other forms of This content downloaded from 70.150.177.5 on Wed, 07 Jul 2021 18:32:46 UTC All use subject to https://about.jstor.org/terms Iyer: The New Economics of Religion 411 participation in nonmarket activities, which the economics of religion sometimes fail to have implications for the allocation of time resonate with non-Western religions, pre during the individual s lifetime. They identi cisely because of their neglect of social pres fied three motives for church attendance - a "salvation motive" (expected afterlife con sumption), a "consumption motive" (satis sures. In contrast, the club goods models of religion do allow for social pressures within clubs, and it is these models that I discuss faction with current church attendance) and next. a "social-pressure motive" (where church 4.1 Club Goods Models attendance directly increases the chance of success in business). Most subsequent One of the most influential papers in the research in the economics of religion that economics of religion is the 1992 paper pub used the Azzi-Ehrenberg framework has lished in the Journal of Political Economy by focused on the salvation motive and the con sumption motive; fewer studies have focused Lawrence Iannaccone. The paper initiated on the social-pressure motive. They also used the model to explain some of the sociological the literature on the club models of religion, which think of religion as a club good that has positive returns to "participatory crowding," findings on religious attendance mentioned previously; for example, if market consump tion alternatives are limited in rural areas, showing that this can lead to free-rider prob lems that are mitigated by costs that increase participation of the devout while at the same the social value of religious activities may be higher there, leading to higher participation. time screening out those whose participa tion is likely to be low.19 Iannaccone pres If discrimination in the job market reduced ents an economic analysis of religious groups the market consumption alternatives of that explains why religious group members' nonwhites, then this could be a factor that drives greater religious participation among utility can increase when unusual religious practices and "seemingly inefficient prohibi nonwhites. Research by Iannaccone also tions" exist. He argues that efficient religions shows that religious activities increase later in life, and why as wages increase, religious participation is reflected more in contribu with rational members may adopt practices such as stigma, sacrifice, and other unusual behaviors. If some religions prohibit alterna tions than in religious attendance per se. tive activities that compete away members' One critique of the Azzi-Ehrenberg resources, then these prohibitions in effect framework is that the notion of "freedom of religion" is largely, though not exclusively of screen the more committed members from the less committed ones. They also induce course, a Western phenomenon. In India, substitution towards religious

activities the Middle East, Tibet, or Indonesia, one is born into a religion and "choice" in this because they make participation in alterna tive activities more costly. The unproduc instance typically means giving up one s right to live within the community of one s birth. tive costs of behavioral requirements can be thought of as a tax on alternative, more sec Practically speaking then, people do not have a choice of religion. This implies that many ular activities. His analysis also makes a use ful distinction between churches and sects, people may practice a religion that they do not approve of, or which even harms their interests. Kuran (1995) discusses this at length in the context of Islam, Catholicism, 19 A "club" is a "voluntary group deriving mutual bene fits from sharing one or more of the following: production and Judaism. For this reason, the Azzi costs, the members' characteristics, or a good character ised by excludable benefits" (Sandler and Tschirhart as Ehrenberg framework and other models in quoted in McBride 2007, p. 396). This content downloaded from 70.150.177.5 on Wed, 07 Jul 2021 18:32:46 UTC All use subject to https://about.jstor.org/terms 412 Journal of Economic Literature , Vol LIV (June 2016) where groups that have norms that are very deviant from the existing culture are termed sects while groups that are more consistent with prevailing cultures are termed churches. While this distinction has been usefully applied to Christian religions, I would con tend that this distinction is also equally valid for non-Christian and non-Western religions as well. Also, sectarian groups attract those with less "secular" opportunities and again, this is true of non-Christian religions as well. This work by Iannaccone spawned a dis tinct line of research within the econom effects on their labor market outcomes. The core of Berman s argument is that contrary to the predictions of price theory, partici pating more in prescriptive religion-related activity is highly time-intensive and so should not be observed when there is an increase in real wages. But across the world, the growth of the most time-intensive radical religious movements, whether ultraorthodox Judaism or radical Islam and Hinduism, are occurring precisely as real wages are increas ing. Berman skillfully resolves this paradox: using club model explanations, he argues ics of religion, which is the so-called "club that mutual insurance networks are formed models" of religion. These models have con tributed vitally to our understanding of how sects develop.20 These models are based on by actions that are religiously motivated. Prohibitions imposed by religions can then be understood in the context of these models the idea that producing and consuming reli because they can be seen as an extreme tax gion has all the features of a collective good on other secular activities outside the reli and that like other collective goods, there is potential for free riding, lack of commit gious club. This increases religious activity among members. Thus, even if real wages ment, and participation. Hence, in keeping are rising, greater strictness of religious with the broad Iannaccone framework, these models look at stigmas and sacrifice as ways observance counteracts this effectively. He of screening members, and predict that also makes the very interesting point that one can also observe

"efficient intolerance" if, for more sectarian communities have tighter example, there is more secular antagonism networks and higher aid from members than towards an extreme religious sect, and this less sectarian religious groups (Iannaccone 1992; Berman 2000; Chen 2010). More recent research that conducts an experi mental test of the club model using a sacri fice mechanism within a public goods game, and allowing groups to form endogenously, shows that groups that have preferences for higher sacrifice screen out free-riders and increase their contributions to the public good (Aimone et al. 2013). A seminal paper in this area is Eli Bermans study of ultraorthodox Jews in Israel (Berman 2000), in which he examined how subsidies to students in Jewish religious schools increased participation and had 20 One paper which examines how a specific denomina tion fits the club model is McBride (2007) who examines how the Mormon Church fits the club goods model. also discourages the members of this club from engaging in other secular activities. Using the example of yeshiva attendance in Israel, he argues that subsidies have caused labor supply to fall, because it causes greater sacrifices. This might also explain high fer tility rates among these populations. This is because when viewed as a tax, religious pro hibitions lower increases in wages, but do not alter the value of women's time, which perhaps explains the higher fertility of these ultrareligious communities. Other studies of club-goods models of reli gion include Chen (2010) which is based on a survey of 8,140 households from 1997-1999 in Indonesia. He examines how the Asian financial crisis affected religious participa tion in Indonesia, showing that those who were most affected by the crisis were more This content downloaded from 70.150.177.5 on Wed, 07 Jul 2021 18:32:46 UTC All use subject to https://about.jstor.org/terms likely to increase their religious participation Berman by arguing that religious ideology as measured through the study of the Koran including rituals and increasing homogeneity and Islamic school attendance; in this way, has a key role to play in the sustenance of religious organizations were providing the commune - notably, by increasing ex post social insurance for people who were equality, commitment, loyalty, and the ben the subject of negative income and consump efits of commune membership, when for tion shocks. Economic distress in particular example the returns to skills outside the stimulates religious intensity and this is pro viding something that other forms of insur commune increase with economic develop ment. Overall, the club goods models have ance are not providing. Chen also shows that been very useful in providing an overarching increased religious intensity is not simply a framework within which to view the activi consequence of having more leisure time ties of religious organizations, and to explain for religious activities or a decrease in the religion-related phenomena. opportunity cost of time; rather, in response 4.2 Strictness and Networks to economic distress, people increased labor and religious intensity. The evolution of research on club mod els has also been developed by Abramitzky (2008 and 2009). Sociologists have discussed communes (Bader, Mencken,

and Parker 2006; Sosis and Bressler 2003). Abramitzky argues that agricultural communes that share a common set of values, using the example of the Israeli kibbutzim , persist and can collapse, and that studying the condi tions under which this happens is interest ing. He highlights theoretical concerns such as communes trying to maximize equality subject to participation constraints, such as a brain drain caused by more productive members leaving, free riding causing moral hazard, and shirking, which is an incentive compatibility constraint, and constraints caused by adverse selection. Greater equal ity makes all of these constraints severe and therefore communes such as the Hutterrites and the Israeli kibbutzim evolved norms in response to these issues, notably, factors like isolating themselves, group ownership of property, investments in education within the commune, high fertility, and a greater emphasis on ideology and commitment to a religious commune, which have all contrib uted to the evolution of communes as we know them today. Abramitzky takes forward the club goods models of Iannaccone and The stigma-screening theory developed in the work of Iannaccone, Berman, and others is a cornerstone of the economics of religion.21 Their argument is that stigmatiz ing behaviors in religion screen out potential free-riders, so according to this theory, strict churches in general ought to have fewer free-riders, higher contributions, and better religious goods. While much of the research on the economic theory of religion examines groups in a static context, some research examines religious groups in a dynamic setting. Counter to this established theory and showing that even strict churches have free-riders and target efforts towards them, McBride (2015) argues that religious groups need free-riders to potentially increase future memberships. This argument is very compelling because it suggests that if expo sure to a religious good increases religious capital22 and subsequent commitment, then the church needs to view free-riders as an investment, and that consequently strict churches might permit some free riding to 21 It should be noted that Iannaccone s work on the strictness thesis built on the work of Dean Kelley and his book on Why Conservative Churches are Growing (1972). 22 Religious capital is defined as "a type of human and social capital that increases an individual s productivity and consumption value of religious goods" (McBride 2015, p. 11). This content downloaded from 70.150.177.5 on Wed, 07 Jul 2021 18:32:46 UTC All use subject to https://about.jstor.org/terms achieve their objectives. This is because the church uses stigmas as a way of screening out those who are most likely to stay free-riders, concentrating its efforts and managing those who might invest in the church later, even if they free ride in their consumption of reli gious goods in the present. Moreover, as an individuals religious capital increases, the incentive to free ride diminishes.23 Models of religious strictness examine how and why groups become more or less strict. Levy and Razin (2012) examine the relationship between how religions instill religious beliefs, participation, and coopera tion. They show that more demanding reli gious groups are

smaller, more cohesive, and comprise those with extreme beliefs. Models of strictness are very useful, but it seems to me that there is a lack of evolutionary mod els that examine how strict groups grow. In this context, one area that is still relatively underresearched is the economic theory on extremism (Berman 2009; Berman and Laitin 2008; Ferrero 2005). There are papers that address this issue in the context of the evolution of fundamentalism, such as Arce and Sandler (2003, 2009), Epstein and Gang (2007), and Iannaccone (1997). Although it is to be acknowledged that there are many different definitions of fundamentalism, Iannaccone (1997) defines fundamentalism as "the degree to which a group demands sac rifice and stigma or, equivalently, the degree to which it limits and thereby increases the cost of nongroup activities."24 Iannaccone (1997) takes forward the ideas in his 1992 paper to examine why a rational 23 Related to the club goods models by Iannaccone (1992), Iannaccone (1997), Iannaccone and Berman (2006), and Makowsky (2012) are other papers that exam ine models of tolerance and intolerance such as, for exam ple, Cerqueti, Correani, and Garofalo (2013). 24 It should be acknowledged that fundamentalism is a term that means different things to different people. The six volume Martin Marty-Scott Appleby collection (1994-2004) deals with all the controversies of definition and intricacies of the issues involved. person would join a fundamentalist sect if it is costly to do so. He focuses on how behav ioral rules arise in fundamentalist groups and makes several predictions that are rele vant to study the growth of fundamentalism. Unproductive costs (such as sacrifice, stigma, behavioral rules) perform two functions they screen out people whose participation would otherwise be low and they increase participation among those who do join. His model predicts that sectarian groups will dis proportionately attract poor, less educated, and minority members of the society; that a general decline in secular opportunities (for example an economic recession) will encourage the growth of sects. His model also predicts that the most successful sects maintain an optimal level of tension with the surrounding society, i.e., they set an optimal level of cost for any target population. Finally, a sect can prohibit only those commodities for which it offers a close substitute - arbi trary strictness fails just as much as excessive strictness. As Iannaccone writes, "sectarian religion appeals to people not because the people have deviant wants, but because the sects provide a collective setting in which normal, but unsatisfied, wants can be met." One of the key benefits of being a member of a sect is access to the network. Iannaccone and Berman (2006) take these ideas forward even further to explain why religious extrem ists sometimes, but not always, engage in violent activities: "Sects are high-powered religious organizations, run by credible lead ers and peopled by active members carefully screened for commitment. Sad to say, these same institutional attributes are also keys to the successful production' of organized violence, especially clandestine violence." (pp. 119-120). One important dimension is the role of social networks. For example, a well-established literature in related disci plines

such as sociology has found social net works to be important for religion, religious This content downloaded from 70.150.177.5 on Wed, 07 Jul 2021 18:32:46 UTC All use subject to https://about.jstor.org/terms Iyer: The New Economics of Religion 415 conversion, and recruitment, and yet this that the role of social norms, social networks, work often lacks formal theoretical models in and social pressures need to be considered the spirit of economics, or handles selection more carefully effects imperfectly in empirical research. It is The economic theory of religious norms here, among other areas, that economists of and networks has been widened to examine religion have yet to contribute significantly. religious competition in the context of spe The main areas that many existing studies cific religious practices such as veiling among do not examine is the role of network struc ture, the role of leadership, the authoritarian Muslim women (Carvalho 2013; Patel 2012). Carvalho (2013) discusses a theoretical structure of an organization, the militancy explanation for veiling (the hijab, which are of fundamentalists, and how fundamental ism might arise as a response to secularity or modernity. More research, especially on how fundamentalism spreads spatially in a network structure, is needed. For example, head coverings) in which this social prac tice is a commitment mechanism that limits temptation to deviate from religious norms of behavior. Carvalho argues that even though the rise of the new veiling movement how isolated nodes in the society form new since the 1970s might seem counterintuitive links with the society, how the influence as it is observed mainly among urban, edu of a fundamentalist leader changes over cated, and working women, this practice can time, and so forth. While Arce and Sandler be conceived as a strategy for integration, as (2003 and 2009) are evolutionary models it allows women to make the most of eco that explain how subpopulations grow and decline as a proportion of the whole popu nomic opportunities outside the household while permitting them to adhere to norms lation (with the subpopulations differing in that preserve their reputation. This explains assortativity), more research on how funda the counterintuitive empirical finding that mentalism spreads over the network would be useful, especially with respect to which parts of the network are most vulnerable. veiling laws have led to a decline in religi osity and bans on veiling have been shown to increase religiosity. In his model, Carvalho Of these models, Arce and Sandler (2003) shows that the demand for veiling would be specifically examined the rise of fundamen highest among women who are from highly talism using a game-theoretic framework. religious groups, but who interact in highly They divided society into two groups of fundamentalists and others, showing that "irreligious environments." This is because individuals may value the opinions of their fundamentalists are more cohesive and less community, regardless of whether they willing to compromise. They use a Nash hold those opinions themselves. And veiling demand game for modeling the interaction emerges as a response to the greater eco between fundamentalists and others. Other aspects that are worth considering here are interactions between the

government and a fundamentalist group, the role of norms, preference changes, and other behavioral criteria, perhaps looking at reputation mod els more closely.25 But all this does suggest 25 It should be acknowledged that fundamentalists do differ greatly in their economic outcomes - some in Latin America and East and West Africa are economically nomic integration of women, who do not want to face social disapproval if they come from a more traditional background, and it is a practice that might prevent the agent from engaging in behavior that is religiously prohibited. One of the key contributions is also to model the agents type as endog enously determined by their social identity. successful; others in many Arab nations are economically unsuccessful. This content downloaded from 70.150.177.5 on Wed, 07 Jul 2021 18:32:46 UTC All use subject to https://about.jstor.org/terms So as religious values spread, even secular types may conform to more religious norms of veiling behavior. The theoretical research on religious strictness and religious net works has widened the scope of theoretical models in the economics of religion, but in my view, this still remains a comparatively less-researched area in the microeconomics of religion. 4.3 Spatial Location Models The theoretical study of religion is also well-suited to models that examine the suggests that one factor that pushes religious organizations toward more extremes is non religious service provision: religious organi zations essentially product differentiate to minimize competition in service provision. This model and others that use theories from industrial organization are particularly applicable to religion in developing coun tries, where inequality may be very high and where the state cannot adequately provide services such as education and healthcare. The model also suggests why, as religious organizations differentiate themselves more, demand side and the supply side together, this sets up the potential for greater con for example, models from the economics of flict among them, which may be mitigated industrial organization. A few papers have then by the same organizations also pro argued that a useful way to think about reli gion, such as the emergence of sects with strict rules, is using Hotelling-style spatial viding more nonreligious services. Having said that, the location models also raise the issue of whether it is realistic to assume one location models (see, for example, Barros religion per person. In various parts of the and Garoupa 2002; Montgomery 2003; Barro and McCleary 2005; McBride 2010), world, people may successfully belong to two religions, a formal religion (like Christianity) although some of these models do not solve and a folk religion. In Africa, for example, for the full equilibrium outcome. McBride (2008) uses a Hotelling model to understand people practice two religions at once and may celebrate Muslim or Christian holidays, religious pluralism and participation, dis but also days that involve the spirits of local cussed above. Iyer, Velu, and Weeks (2014) develop and solve a formal Hotelling-style model to elucidate how religious organiza religions. So perhaps the location models also need to be more complex to take these local factors on board. All this does suggest, tions

might differentiate themselves on the strength of religious beliefs and its implica tions for service provision, as applied to the though, that the whole area of applying mod els from industrial organization to the study of religion seems ripe for further research. context of a developing country like India. Their model emphasizes the dependence of 4.4 Experiments the religious decision and the service decision Reputation is a theme that emerges from on each other: this interdependence is often mentioned, but not always fully developed both the evolutionary and current experi mental research on religion. Some studies formally in the economics of religion litera are exploring evolutionary models of religion ture. This model is also particularly import ant in societies that have income inequality, that examine religion as a response to evo lutionary behavior by groups that concern a factor that is alluded to in many of the issues such as reputation and competition Hotelling-style models, but again, not devel between groups. While some of this work is oped into the thinking as fully.26 The model inequality as measured by the Gini coefficient is strongly 26 Examining World Values Survey data from 1981 related to religiosity as measured by the propensity to 2001, Norris and Inglehart (2004) show that economic engage in religiosity through prayer. This content downloaded from 70.150.177.5 on Wed, 07 Jul 2021 18:32:46 UTC All use subject to https://about.jstor.org/terms Iyer: The New Economics of Religion 417 empirical, including agent-based modeling to explain religious regionalism (Iannaccone monitoring, to the degree that it is genuinely believed and cognitively salient, offers the and Makowsky 2007), economists of reli powerful advantage that cooperative interac gion have also been taking theory to exper tions can be observed even in the absence of imental data based on field and laboratory experimental research. A growing number social monitoring" (Norenzayan and Shariff 2008, p. 58). The effect on trust is that reli of studies examine how religion affects gen gious belief increases trust, decreases the erosity, trust, and fairness toward strangers cost of monitoring, and hence increases pro (Anderson and Mellor 2009; Henrich et al. social behavior. They suggest that further 2010; Paciotti et al. 2011), as well as the research on issues such as empathy and com evolution of cooperation, such as for exam passion, which motivate prosocial behavior, ple among the Israeli kibbutzim (Sosis and is needed. It would also be useful to know Ruffle 2004). Paciotti et al. (2011) present experiments that test if religion promotes prosocial behavior in dictator, trust, and pub lic-goods games. Keuschnigg and Schikora more about the substance of the religious thoughts involved, because some religions discourage free riding within the commu nity of believers, but encourage it within (2014) conduct an experiment on voluntary contributions to public goods among reli the broader community. So more research is needed on the content of religious teachings giously heterogeneous groups in India by and if the teachings differ, the experimental conducting a laboratory experiment to find results may then only apply to a subset of that while cultural diversity does not affect people in the experiment. contributions in a public-goods game, the interaction between

cultural heterogene ity and leadership shows that there is less 5. Identification , Secular Competition , cooperation from followers in mixed groups. A set of experimental studies also examine religions impact on health behaviors (both and Charitable Giving In his 1998 review, Iannaccone alluded to mental and physical), crime, and norms the possibility that religion s statistical effects toward charitable giving (Lambarraa and may be spurious and that "nothing short of Riener 2012). In this context, one interest ing wide-ranging experimental study that amalgamates research from anthropology, a (probably unattainable) 'genuine experi ment' will suffice to demonstrate religions causal impact. Yet one should also recog experimental psychology, and economics, is that of Norenzayan and Shariff (2008), who nize that there exist plausible a priori argu ments for religion s impact and that despite examine the evolution of religion in the con numerous attempts to root out spurious text of prosocial behavior, i.e., good behavior correlation, many religion effects remain towards others that might engender a cost substantively large and statistically signifi to the individual. They highlight the role of cant" (Iannaccone 1998, pp. 1,475-76). For reputation and selection that reinforces the contemporary research on religion, the prob relationship between religion, prosociality, and cooperation in general. Their findings lems of identifying the causal effect of reli giosity on economic outcomes still remains show that if religious thoughts are imbibed in experiments, then this increases trust as well as altruism toward strangers. The question is, the focus of most current empirical studies. why that might be the case, and they offer These studies explore the effect of religious competition, secular competition, and policy debates about faith-based welfare programs one suggestion: "However, supernatural and the economic regulation of the church. This content downloaded from 70.150.177.5 on Wed, 07 Jul 2021 18:32:46 UTC All use subject to https://about.jstor.org/terms 418 Journal of Economic Literature, Vol. LIV (June 2016) The difficulty of identifying the causal effect of religion clearly in econometric studies is an important concern, as reli gious variables do not always help pre dict cross-country differences in income (Durlauf, Kourtellos, and Tan 2012). This issue is a feature of macroeconomic and in Wittenberg is not always available in other contexts. Alternatively, one can use a theoret ical model to ground an approach that then negates the need for an instrument, but this also requires strong adherence to the model itself, and may not always be applicable to all individuals. Consequently, there is no single microeconomic research on religion (see accepted solution to the problem of religion Hungerman 2011 for a thoughtful review and endogeneity, but a menu of options that of the statistical issues of identification in models of religion). The main issues arise with respect to measurement error, reverse causality, omitted variables, missing values, and self-selection, which cause the covari ates to be correlated with the errors, ren dering our regression estimates both biased and inconsistent. Addressing endogeneity, clear identification of religion effects and the heterogeneity of samples are important concerns. The basic problem is that religi osity

is endogenous and many studies have attempted instrumental variable strategies such as demographic indicators of various kinds, including religion market density, eth nic heritage, or other instrumental variables, to provide an exogenous source of variation. There are a number of ways in which economists have attempted to address the issues surrounding religion and endogeneity. For example, some experimental research can "prime" religion, or rely on the exoge nous timing of religious events such as the Ramadan fasting period, as discussed below, but this approach may not be easily general izable to other religions. Some researchers, as discussed below, have used policy events such as blue laws, which are interesting in that they are exogenous to religiosity, but may impact both religious and secular phe nomena, so may not be ideal instruments for religions in all situations. Some stud ies use distance from a historical event, as discussed in section 2, but this requires an assumption that the location and timing of the event is exogenous, and a seminal histor ical event such as the birth of Protestantism economists can draw from. One significant study in this respect is Gruber (2005). He highlights the potential difficulty of evaluating the effect of religiosity on economic outcomes, because of various other factors that are likely to be very highly correlated with the outcomes of interest. He suggests one way of getting around this issue is a measure of religion market density - this is simply the share of the population living in an area that belongs to the individual s own religion. The idea underlying this thinking is that if more people in your area share your religion, then the social interaction effects might affect you more. Moreover, the den sity itself can be exogenously predicted based on the ancestry in an area. Based on General Social Survey data from the United States, Gruber finds that higher market den sity causes greater religious participation, higher education and income, lower levels of welfare receipt and disability, higher mar riage rates, and lower divorce rates. Grubers (2005) identification strategy is important to the development of empirical work on religion, and so is reproduced below. In essence, he estimates religious attendance as a function of religious market density: (1) Ķa = a + ßRELIGDENS^ + 7 ANCESDENSia + 6AGESDENS + 6ANCESia + XAGESia + pRELIGia + 7rAREAa + rYEARt -h e. This content downloaded from 70.150.177.5 on Wed, 07 Jul 2021 18:32:46 UTC All use subject to https://about.jstor.org/terms In this equation, R measures religious atten refinement of his strategy, he also excludes dance, i is the individual, a is the area in which she lives, and t is the year. RELIGDENS is the individuals ancestral group when he computes PRDEN so that this shows the the percentage of the population in the area likelihood that an individual lives with her that also belongs to individual is religion. ANCESDENS is the density of ancestry coreligionists, but based as a calculation of the other ancestral groups resident in the group, and AGESDENS is the density of the area. age and sex composition of the group. The Grubers approach has many strengths, model also includes a range of fixed effects for the individuals ancestry (ANCES), age including that if we have access to data

on religion and ancestry in one dataset, such and sex, religion, area, and year fixed effects. as for example the GSS, and ancestry and This approach parcels out the effect of reli outcomes (but not religion) in a another gious market density on the individual s own dataset, such as for example the US Census, religious participation. This specification then these two datasets may be combined to allows us to examine if an individual is more study religion even when data on religion is religious if there are a higher percentage of coreligionists in the same area (a higher ß) compared to other religionists in the same not available in all the datasets being used for a study. It should also be acknowledged that while the Gruber study is very important area, and relative to other coreligionists who to empirical studies of religion, its focus is live in other areas that have lower market density. Gruber is careful to point out that, even with this specification, there could still be instances of measurement error in cal on non-Hispanic white males. So while this approach may be very intuitive in thinking about Catholics in America, it may be less intuitive for other groups, faiths, and ethnic culating the relevant densities. To address these issues, he then creates an instrument ities. The value of this approach may also be constrained if ancestry data is unavailable, or for religious density that is based on an indi if everyone is of the same ancestry, because vidual s ancestry and the ancestries of other individuals living in the area. Gruber s instru ment is: (2) PRDENna = T,r[Pm X (T,nPm x ANCES^)}. In this equation, n denotes the ancestries, r denotes the religions, and a denotes the area in which individuals live. PRDENm is then the predicted density for an ancestiy group n in an area a and Pm is the distribution of religious preferences r within each ancestry n. ANCESm is the density of each ancestry group n in each area a. Grubers approach is important to the literature on identifica tion of religion effects because the ancestry captures the religious density, and it also deals with measurement error. As a further then religious density may not be as useful if people are self-selecting not only on the basis of their religion, but also on their location. If we can identify religion effects in this way, among others, then it allows us to demonstrate the effect of religion on var ious economic outcomes. For example, using a variety of identification strategies including religious market density, sibling fixed effects, and others, some studies show that religious participation is associated with less depression, greater happiness, and more mental-health stability (Mellor and Freeborn 2011). Others point to a relationship between religion, aging, and health (Deaton 2011), and a lower likeli hood of committing crimes (Gruber and Hungerman 2008). In this context, econo mists have also used secular variables as a way to distinguish between subpopulations, This content downloaded from 70.150.177.5 on Wed, 07 Jul 2021 18:32:46 UTC All use subject to https://about.jstor.org/terms identifying the effect of religiosity clearly as discussed in more detail below. Exploring secular variables to obtain iden tification is related to the interaction between religious competition and secular competi tion because

religion may provide a form of social insurance. Some work has examined whether households who contribute to reli gious organizations are better able to insure against income shocks (Dehejia, DeLeire, and Luttmer 2007). Self-insurance provided by religious organizations may have impli cations for social insurance provided by the government. There might be less demand for social insurance in more religious areas, and when social insurance is being provided and provided well, this might also "crowd out" insurance functions being provided by religious organizations (Hungerman 2005). Dehejia, DeLeire, and Luttmer (2007) study whether participation through contributions provides consumption insurance, compared to participation through attendance that pro vides happiness insurance against income shocks, using data from the US Consumer Expenditure Survey from 1986-2000. In their survey, they find that religious contributions represent about 1.2 percent of household income. They also find some limited evidence that the form of insurance provided by orga nizations differs by race. Norris and Inglehart (2004) provide cross-sectional evidence that rising state coverage, for example health-care plans or pensions, decreases religiosity. Chen (2010) presents religious groups as providing insurance benefits. Related to thinking about religion as insurance, research on Protestants in the United States has assessed whether changes in the business cycle affect religi osity by examining the relationship between macroeconomic conditions and Protestant religiosity, finding a countercyclical compo nent to participation in evangelical Protestant denominations, mainly due to lower socioeco nomic status, and a procyclical component for mainline Protestants (Beckworth 2009). An alternative strategy that economists have used to aid identification is to examine the "charity gap" - religious giving in the con text of more general secular charitable giving. The research on giving to religious charities is closely related to work on charitable giving (Andreoni 1989; Andreoni 1990). A third of charitable giving in the United States goes to religious causes (Engelberg et al. 2014); but even in the United Kingdom, which is less religious on average, data from the National Council for Voluntary Organisations' UK Civil Society Almanac 2010 shows that reli gious and international organizations obtain the greatest share of income from individu als; each receiving approximately 40 percent of their total income from individual dona tions (NCVO/CAF 2010). In this context, Hungermans work (2005) has focused on the public policy implications of the intersection between religious and charitable giving, secular institutions, taxa tion, and public spending. His focus is on how religious institutions may compete with other secular institutions such as schools, local government, or shopping malls, which may be even more important than competition between religious organizations themselves. He finds that congregations in his survey are more concerned with secular competi tion than with competition from other reli gious groups (Hungerman 2011). This work also stems from a methodological concern to find instrumental variables that identify the effect on religion of policy changes ostensi bly unrelated to religiosity or

demograph ics. Hungermans research examines policy changes that concern formal governmental regulation of religion, especially the United States' blue laws, which controlled economic and other activities on Sundays and resulted in decreases in religious participation. Gruber and Hungerman (2007) examine historic pub lic goods provision in the Great Depression; they argue that such provision can crowd out religious provision of these goods. This content downloaded from 70.150.177.5 on Wed, 07 Jul 2021 18:32:46 UTC All use subject to https://about.jstor.org/terms Iyer: The New Economics of Religion 421 Hungerman (2014) has pursued these Based on US Protestant denominations in identification issues further, showing how the club-goods model can be used to generate 2005, and focusing on their foreign opera tions, they show that religious denomina an empirical test for whether religious rules tional strictness attracts more adherents and proscriptions alter peoples behavior. where service provision is weaker and where The test allows rigorous study of this topic, the risk of vulnerability through disease or even in settings where exogenous changes diasters is higher. in religious rules are unavailable, i.e., where While this paper dealt with Christian it is difficult to find an instrumental variable churches, another series of papers looks for religiosity. Religious individuals may at Islam, using the exogenous timing of be more responsive to variation in secular incentives such as, for example, changes in Ramadan to explore the effects of religious fasting on outcomes (Oosterbeek and van der blue laws, casino openings, and variations in laws that concern the minimum legal drink ing age. Highly religious individuals are very Klaauw 2013; Almond and Mazumder 2011; Majid 2013). 27 These papers take advantage of Ramadan as a treatment variable and their responsive to changes in secular incentives. contribution is important both conceptually, These identification issues continue to be in terms of examining the effect of Ramadan very important in the context of empirical practices in Islam on educational and other research on religion. In this context, one study examines the economic outcomes, and econometrically, in terms of having found a way to identify the structure within religious organizations themselves - notably, whether religious effects of religion on outcomes that takes advantage of the exogenous timing of the personnel, such as pastors, and their labor fasting period. For example, Oosterbeek and inputs have a causal effect on religious atten van der Klaauw (2013) estimate the effect dance and church growth (Engelberg et al. 2014). This study examines Methodist con gregations in Oklahoma between 1961 and of Ramadan on the educational outcomes of economics students who are Muslim but who live in the Netherlands, and where 2003, showing that better pastors sizably teaching and exam dates are not adjusted and significantly increase church growth, and that a pastors performance in his first church, which is usually randomly assigned for the fasting period, as is the case in coun tries that are Muslim. The fast is expected to reduce academic performance because the in Methodist groups, predicts significantly their future performance, so that while pas students have less

nutrition, hence may be less able to concentrate and to study. They tor effects are important in churches that examine data over five academic years from are both large and small, better-performing 2003-08 and use a difference-in-difference pastors are invariably assigned to larger con gregations. The study observes a particular framework that uses the number of fasting weeks over the duration of an introductory church under the tenure of different pastors. This study overcomes identification issues by microeconomics course, and which varies yearly. If students observe Ramadan, then using the random assignment of pastors in this has a negative impact on their academic their first church in order to predict subse quent performance. Another carefully done empirical paper is Hanson and Xiang (2013), which examines how a denominations 27 Ramadan is a religious fast undertaken by Muslim men and women for about a month each year, in which they eschew all food and drink between sunrise and sun doctrine, as well as its governance structure, influences its capacity to attract adherents. set. The fast is undertaken to encourage patience and piety, and the timing of Ramadan follows the Islamic calendar. This content downloaded from 70.150.177.5 on Wed, 07 Jul 2021 18:32:46 UTC All use subject to https://about.jstor.org/terms 422 Journal of Economic Literature , Vol LIV (June 2016) achievement, reducing the final grades of Muslim students by approximately 10 per cent of a standard deviation. Interestingly, there is no difference between male and direct effects of reduced nutritional intake having an impact on productivity, Ramadan affects the relative preferences of Muslims between work and religiosity by changing female students, and the Ramadan effect is beliefs that may influence labor-market not caused by lower attendance in the intro choices. ductory microeconomics course. Majid (2013) studies the effects of in utero exposure to Ramadan fasting over the life cycle and finds very significant school per formance differences among Indonesians in during childhood and in the labor market in adulthood, based on whether mothers fasted Studies that use Ramadan fasting sys tematically exploit the timing of the fast ing period and the geographic location of countries that observe Ramadan rules as an exogenous source of variation. Yet this type of tidy exogenous instrument may not always be available for other religions. What during pregnancy and when they fasted. Children whose mothers fasted also had lower birth weight, performed more child labor, and scored lower on cognitive tests, suggesting that the practice of mothers fast ing during pregnancy should be minimized. Almond and Mazumder (2011) show that for Arab parents in Michigan in the United States between 1989 and 2006, mothers' prenatal adoption of Ramadan fasting rules causes lower birth weight in babies, although the magnitude of these effects is small. The timing of prenatal nutrition is important here, as Almond and Mazumder compare births that overlap with Ramadan fasting with those that do not, estimating a reduced form effect of Ramadan on births. They esti mate an intent-to-treat effect that does not rely, for identification, on the decision to fast. They also examine Census data on Muslims in Uganda in 2002 and in Iraq in 1997 to

show that adults there are 20 percent more likely to be disabled or to have mental or learning disabilities with even larger effects if the first month of their mothers' pregnan cies coincided with the Ramadan fasting month. Some studies of Ramadan fasting investigate macroeconomic outcomes. For example, Campante and Yanagizawa-Drott (2013) study whether Ramadan fasting has a negative effect on output growth in Muslim countries, and if it increases subjective well-being. They argue that rather than the we have learned from all of these empirical studies of different religions is that econo mists are coming up with innovative ideas to aid identification, whether by relying on innovative instruments that are drawn from religious, ancestral, or secular factors, or by deferring to long-standing religious prac tices, to demonstrate causally the effect of religion on various educational, health, labor market, and other economic outcomes. 6. Conflict and Cooperation in Developing Societies Most research in the economics of religion has focused on developed countries. With the availability of new data, economists now are examining particular religions in varied historical time periods, also drawing lessons from this experience for religious networks in contemporary developing societies. This literature has focused both on conflict and on cooperation engendered by religion, and is an exciting area of research in the econom ics of religion. In this section I discuss the literature on terrorism; trade, politics, and conflict; religiously provided social services; religion and finance; and I make the case for the need for a wider scope in our studies in the economics of religion on developing societies. At the time of writing Iannaccone s 1998 survey and subsequently in other reviews This content downloaded from 70.150.177.5 on Wed, 07 Jul 2021 18:32:46 UTC All use subject to https://about.jstor.org/terms Iyer: The New Economics of Religion 423 (Iannaccone and Berman 2008; Iyer 2008), model to show how this is related to factors the point was made that most religion such as aspirations, education, public-sector research is on the United States and other developed countries in the Western world. employment, and inequality. Examining conflict and cooperation in There is still a great need for studies on developing societies has been aided by the Latin America, Africa, the Middle East, and Asia. There is notable work on the Middle availability of much better data. Sociologists and political scientists have been very active East with a range of work by Kuran (2010), in using data to address important issues that Chaney (2013), El-Gamal (2006), and others; and a few studies of India and China (Yang 2012). From the perspective of developing concern international religious freedoms and religious restrictions. These include societies, or those in which there is greater uncertainty, economics is valuable because the relationship between religious institu tions and the state, whether the state per mits religious freedom or forms alliances it illustrates how religion and religious norms might act as an informal coordinating with certain religions, and movements that might restrict those freedoms (Finke 2013). mechanism. The kind of spontaneous social coordination that religion creates through This research also examines the conse quences of restrictions for religious

conflict. increasing trust, morals, informal incentives In early work, Finke (1990) and Finke and or through imposing social sanctions are very Stark (1992) argued that religious freedoms important in these societies, especially when in the United States led to the "churching there is an absence of well-developed legal systems and formal markets. In this context, the relationship between religion and pub lic-goods provision is an important focus that economics brings to a discussion of religion. Studies in this area include Berman (2009) of America" because religious freedoms increased the supply of religion by altering the incentives for both religious producers and consumers. Finke (2013) takes this argu ment further by examining the relationship between religious freedoms and social con and Iyer, Velu, and Mumit (2014), which flict, specifically whether countries have laws highlight the important but less-studied area that restrict religious freedoms. Finke (2013) of religion and service provision in contem points out that how the state views religion porary developing countries. Other studies or minority groups may affect whether they focus more specifically on religious beliefs. promote or hinder religious freedoms, and For example, Clingingsmith, Khwaja, and that whether states have the institutional Kremer (2009) examine whether participa capacity to enforce religious freedoms, tion in the hajj (the pilgrimage to Mecca) as decided by a lottery among Pakistani including whether a country has an inde pendent judiciary, is important. Religious pilgrims has effects on religious practices. restrictions may also alter how organizations The hajj participation increases orthodox function, and religious market structure Islamic rituals such as prayer and fasting, but also increases tolerance towards other eth nic groups and others' religions in general, as well as more benign attitudes towards women. Studies of religious revival move ments among the middle classes, for exam ple in Egypt, show how development might make societies more prone to religious reviv als. Binzel and Carvalho (2013) develop a more widely, including by affecting religious persecution (Finke 2013; Grim and Finke 2011). Grim and Finke (2011) document that many people in the world have been fac ing an increase in persecution. This interest 28 For example, Roger Finke (2013) defines religious freedoms as the "unrestricted practice, profession and selection of religion" (p. 299).

of Economic Literature, Vol. LIV (June 2016) in religious freedoms and restrictions is also echoed in the recent literature from politi cal science. For example, Fox and Tabory (2008) used the Religion and State dataset between 1990 and 2002 to argue that state support for religion affected religious plu ralism and that state regulation of religion is negatively correlated with religiosity if reli giosity is measured by religious attendance, although they also find that religious beliefs are affected less. 6.1 Terrońsm very few deaths, relative to

other kinds of hazards, and there is frequently a cyclical pattern to transnational terrorism. The data show that terrorist incidents come in waves and cycles due to demonstration effects; and because of economies of scale in planning terrorist attacks, this can lead to terrorist incidents being clumped together. Although the question of terrorism is separate from, but related to religion, one of the interesting findings of the research in terrorism is that religion-based terrorist groups have been seeing a rise in more recent decades. For Empirical research has been exploring example, since the early 1980s, the number the links between religion, economics, and terrorism, both within and across national of terrorist groups that are religion-based have risen from two out of sixty-four groups boundaries (Berman and Laitin 2004; Sandler and Enders 2004; Krueger 2007; Keefer and Loayza 2008; Berman 2009). in 1980 to twenty-five out of fifty-eight groups in 1995 (Sandler and Enders 2004, p. 305 citing Hoffman). Forming global net In particular, Krueger (2007) investigated works is also important here. For example, whether income was related to transnational terrorism. The general conclusion that terrorists can limit how effective countries are in counteracting terrorists because the emerged in this work is that weak property externalities are greatest when countries are rights and poor civil liberties might matter more for the incidence of international ter rorism than poverty. Berman (2009) exam ined terrorism in the Middle East, arguing more uncoordinated in their decision mak ing to counteract terrorism. 6.2 Trade, Politics , and Conflict that many religious groups such as, for example, the Hamas, provide spiritual ser The concern with conflict all over the developing world is very much a product of vices alongside social and welfare services its historical evolution. For example, very in the regions where they operate. Sandler and Enders (2004) provide an economic useful insights have been gained by focusing on Islam and on Judaism. Michalopoulos, perspective on transnational terrorism.29 Naghavi, and Prarolo (2016) provide a con They argue that transnational terrorist inci ceptual framework to think about how Islam dents are transboundary externalities, to the is related to inequality and preindustrial extent that any actions undertaken by coun comparative development. They show that try authorities or terrorists in one country Muslim societies were located along geo can impose costs and benefits on other coun tries. Antiterrorist activities might some graphically unequal territories near trade routes, and theoretically demonstrate how times create unintended consequences. this might have influenced Islamic thought. Transnational terrorism actually results in 29 Sandler and Enders (2004) define terrorism as "the premeditated use, or threat of use, of extranormal violence to obtain a political objective through intimidation or fear directed at a large audience" (p. 302). Trade routes created different opportunities for areas with dissimilar geographies, such as between areas of fertile and arid land. If there was unequal land distribution with trade, this encouraged predatory behavior by less well-endowed regions. This caused patterns This content downloaded from 70.150.177.5 on Wed, 07 Jul 2021 18:32:46 UTC All

use subject to https://about.jstor.org/terms Iyer: The New Economics of Religion 425 of static and dynamic income redistribution Some theoretical work has linked religion that emphasized direct transfers of income. and politics - for example, how politicians So for Islam to persist, income inequality had to be restrained and this influenced dynamic income redistribution through rules and have an incentive to take an extreme stand on issues that might be proscribed by some reli gions, such as abortion or same-sex marriage, religious prescriptions on capital accumu lation and increased public-goods provision through endowments from religious insti in order to induce their core supporters to vote and make donations (Glaeser, Ponzetto, tutions. Consequently, Islam put forward and Shapiro 2005). Empirical studies high light the political importance of religious various obligations and laws for income redis tribution and poverty alleviation through the leaders. For example, Chaney (2013) pro vides the first illustration from economic zakat, costs on accumulating capital such as the anti -riba (interest) laws that increased history that the political power of religious leaders may be important when there are transactions costs, and contributions to economic downturns. He argues that during waqfs. In turn, Michalopoulos, Naghavi, and floods that are deviant to normal flood lev Prarolo argue that this affected preindustrial economic development in Islamic countries; this compares to countries in which although els of the Nile river, allocations to religious structures, compared to secular structures, increase. Religious authorities were also less Christianity initially enforced laws against likely to be replaced. Judges were less likely usury, the relaxation of usury laws in Europe to be dismissed by the sovereign or to resign preceded the Reformation by 150-200 years, when the Nile flood was abnormally high or indicating that it was not something about low. This is because the Nile floods increased the Reformation, but a deeper institutional the propensity for social unrest and the pos difference between the Middle East and sibility that the religious leader could coordi Western Europe that was the cause for the divergence between them (Rubin 2011). But nate a revolt. These findings are consonant with a wider literature on conflict that sug more generally, more research is needed on gests that economic crises precipitate the the interactions between religion, trust, and collapse of autocratic regimes because they cooperation (Gagnon 2014). disrupt the balance of political power. In One theme that unites many economic his tory studies of religion is conflict and cooper this case, Chaney argues that power moved in favor of religious authorities in historical ation. Some studies relevant here are those that examine Israeli communes such as the kibbutz (Abramitzky 2008 and 2009) because these communes are based on an ideology that stresses cooperation and minimizes con flict. Other research examines the histori cal basis of conflict and the role of religion and empire in these contexts (Iyigun 2008), studying especially the rise of monotheism, which provided economic and political ben efits. Iyigun (2008) shows how Ottoman mil itary activities between the 1520s and 1650s reduced intra-

European religious conflict by over 50 percent and also reduced conflicts in Europe more generally. Egypt. This resonates with current debates about the rise of the Arab Spring. This work is important in the context of wider research that demonstrates that religious leaders in historical populations may have exercised considerable political patronage and power. 6.3 Religiously Provided Social Services While religion may have an influence on conflict, it also affects cooperation by providing access to services. For example, many religious groups have provided social services such as education, as shown in a national study of congregations in the United States (Chaves 2004) and in other research This content downloaded from 70.150.177.5 on Wed, 07 Jul 2021 18:32:46 UTC All use subject to https://about.jstor.org/terms 426 Journal of Economic Literature , Vol. LIV (June 2016) on secular and religious competition in ser vice provision (Hungerman 2005). In the developing world, the Hamas have provided spiritual services alongside social and welfare services in the regions where they operate (Berman 2009). In contemporary India, in the first large-scale study of the econom ics of religion there, religious networks are important not only for the religious services they provide, but equally and especially for their nonreligious services, specifically with respect to health and education (Iyer, Velu, and Weeks 2014; Iyer, Velu, and Mumit 2014). Moreover, as religious institutions provide this insurance function, these net works might then determine the extent to which education or health care is taken both forms it served as a safety net, reducing conflict. One interesting question Kuran (2004) addresses is why the West did better eco nomically than the Middle East. The devel opment of financial institutions in the Middle East has influenced economic development in this region, relative to other parts of the world. The Middle East developed institu tions from about the seventh through the ninth centuries; Western Europe did so by about the tenth century. By the eighteenth century, the Middle East showed many signs of economic backwardness, mainly due to its social mechanisms and legal institutions, which had stagnated. The main culprits were the law of inheritance under Islam, which up, especially where these services are less hindered capital accumulation; and the waqf well-provided for by the state.30 6.4 Religion and Finance institution, which used up resources in an organization to provide social services that were often unproductive. Traditional Islamic One aspect of development that seems par law also had a role to play because it causes ticularly salient is the financing of religious low human capital and inhibits the develop activity and how religion might influence financial institutions in developing societies. ment of the private sector. The features of these societies in particular For Islam, there have been detailed investi include contract law on the joint ownership gations by economic historians into financial of property; finance that was provided with systems in the Middle East including zakat , out banks and in the absence of corporate the alms for charity (Kuran 2004; Kuran structures; Islamic law that only recognized 2010; Kuran 2014). Kuran points out that zakat emerged as a religious tax in

seventh century Arabia; it was mandatory and paid to the Islamic state. Within a few decades, individuals; and public or semipublic goods not being provided by the state. This was the obligation stopped being enforced by the state and the tax metamorphosed, in essence, into a voluntary act. There are efforts in the twentieth and twenty-first centuries to make it mandatory again. Zakat is relevant to stud coupled with an inheritance system, arbitrary taxation that was unsystematic in its discrimi nation, and weak property rights. In the case of the inheritance system, an egalitarian sys tem limits the concentration of wealth, but the net effect of this was the fragmentation of ies of conflict and cooperation because in wealth, especially financial wealth. In the case of the waqf, this was a pious foundation or an unincorporated Islamic trust. Its role was very much to provide social services by turning 30 Religion and service provision is an important aspect some forms of property into an endowment to of current research in religion because religions do argue support various kinds of social services such that social services are either only a means to attain spiri as a mosque, a school, and so forth. The pro tual ends, to promote religious conversion, or as a moral imperative and so an end in itself, regardless of whether vision was quite egalitarian in that the services those who are served convert to the religion. were provided to Muslims and non-Muslims. This content downloaded from 70.150.177.5 on Wed, 07 Jul 2021 18:32:46 UTC All use subject to https://about.jstor.org/terms Iyer: The New Economics of Religion 427 According to Kuran (2004), the waqf is an interesting Islamic institution because legal infrastructure was self-enforcing in that there was little incentive to change the infra it arose as a response to poor private prop structure. So the very legal structures that erty rights. As he points out, Islam s original pushed the Islamic world ahead for centuries institutions do not include the waqf, which following the initial spread of Islam were also the Quran does not mention. However, the precisely the ones that helped keep it behind waqf is regarded as sacred because it served as Western Europe moved ahead. But this important charitable purposes; the rulers did not confiscate the assets of the waqf as rul research does suggest that the whole rela tionship between Islam and economic per ers were keen to appear devout. The other advantage of the waqf was that if a prop erty was endowed as a waqf this provided it with some immunity against expropria tion. Moreover, while there was no formal formance needs more careful review - see Kuran (2014) for an overview of the histor ical and contemporary links between Islam and economic performance. More contemporaneously, Iannaccone legal obligation, the rulers did encourage the and Bose (2011) argue that Christian reli waqfs to provide social services. gions can be contrasted with non-Christian Kuran (2010) argues that in addition to ones such as Hinduism, Buddhism, and the static effects discussed, more impor Islam, which has implications for how fees tandy over the longer run, the static effects for religious membership are calculated. jointly produced negative dynamic effects. The incentives to generate more advanced and flexible organizational forms suitable Here they

develop alternative models to the rational choice approach including "client practitioner" relationships where individual to modern development were supressed. religious goals can be attained without nec While this was not a handicap in the Middle essarily requiring collective participation in Ages, it became a handicap when the West developed and technologies changed. He also points out that one difference was that religious services or other practical forms of religious observance. So they argue that religions that obtain donations for certain Western establishments were larger than services individually performed are differ those in the Middle East. There were also no stock markets or banks in the Middle East. The waqf system did not provide as much by way of public goods services as in the West, which saw the development of more organi zations that were chartered as corporations. The waqf system also led to corruption. It had a positive and a negative side - on the one hand creating a nongovernmental orga nization; on the other creating social ineffi ciency. The rule of law was limited; although the two systems started out with similar contract law, due to different inheritance regimes, they followed very different evolu tionary paths. By the nineteenth century, the regions legal infrastructure prevented the organizations' becoming more sophisticated and accumulating capital. Moreover, the ent from those who charge membership fees or are government funded. Again, while we have learned much about religion and finance historically, it would be useful to have more studies that document these links for contemporary populations. 6.5 The Need for a Wider Scope In assessing the economic history of reli gion research, it is very striking that much more has been done on the economics of Islam than on the economics of Hinduism, Buddhism, Jainism, or Sikhism. This seems unusual, especially for Hinduism, as this is equally a very ancient religion and there is much interest in this subject both in South Asia, and in other countries that have Hindu populations. For example, while Hindus This content downloaded from 70.150.177.5 on Wed, 07 Jul 2021 18:32:46 UTC All use subject to https://about.jstor.org/terms make up about 15 percent of the worlds population, they make up over 80 percent of the population of India. This compares to Muslims who are approximately 23 percent of the world s population and about 15 per cent of Indias population. Nevertheless the economics of Islam seems to gain a dis proportionate amount of academic atten Muslims had when shipping via the Indian Ocean, due to their coordination with over seas markets through pilgrimages such as the hajj. Although medieval trading ports were more heterogeneous ethnically, they were five times less prone to Hindu-Muslim riots and 25 percent less likely than other towns to experience a religious riot between 1850 tion versus the economics of Hinduism. One possibility for this dearth of interest in and 1950. Jha attributes this to the persistent good institutions which arose in earlier peri Hinduism may simply be that India has done well economically, so possibly when a soci ods and supported and encouraged medie val trade among ethnic groups. This caused ety is

moving ahead, one is less interested in some cities like Surat to exhibit greater deep forces that might have held it back in communal amity many decades later, com past centuries. A few economic history stud ies that do look at Hindu groups more are those by Jha (2013); and Kuran and Singh pared to cities like Ahmedabad. The general theme that trade promotes interethnic and interreligious tolerance is of course a more (2013). Recent works by Iyer (2002) and general argument that goes back to Albert Iyer, Velu, and Weeks (2014) discuss more Hirschman s The Passions and the Interests contemporary Hindu populations. If the (1977), and as we learn from Hirschman, to work on Hinduism is limited, the work on the giant thinkers of the Scottish and French Buddhism is even more so, although with the Enlightenment. Early economists under notable exception of McCleary and van der Kuijp (2010) on Tibet. It would also be very stood that trade also reduces conflict, which useful to have more research conducted on religion in China, certainly in the context of an increase in economic growth and dimin ished state repression, which could lead to a growing market for religion (Yang 2012). One theme that comes up repeatedly in developing countries is the ability of reli gion not only to foster conflict, but equally to mitigate it and foster cooperation. This finds echo in economic history too - an important study explores how religious and occupational activities fostered coopera tion in the context of European medieval institutions such as craft guilds (Richardson and McBride 2009). This theme is echoed also in work on medieval India. For exam then facilitates trade, creating a virtuous cycle. A broader policy implication is that places that suffer conflict can be helped in the long run through policies that promote trade. Therefore, good economics can foster good politics. This argument is relevant to public goods provision more generally, as well. Iyer, Velu, and Weeks (2014) provide evidence for religious competition and cooperation in contemporary India by examining reli gious and nonreligious service provision. Based on primary survey data on Indian religious organizations collected between 2006 and 2010 spread across seven major states, the study shows that religious orga nizations are differentiating themselves on ple, Jha (2013) presents an overview of how the strength of religious beliefs with respect interethnic complementarities in medieval trading ports led to better institutions and to other organizations, and are also provid cooperation which minimized the chance ing higher education and health services in response to religious competition and of Hindu-Muslim conflict many centuries later. This arose due to specific advantages as economic inequality increases in India. Another vehicle for fostering cooperation This content downloaded from 70.150.177.5 on Wed, 07 Jul 2021 18:32:46 UTC All use subject to https://about.jstor.org/terms Iyer: The New Economics of Religion 429 is education; one study examines the rela and Wydick (2014), which examines the tionship between religion and education, operation of child sponsorship programs emphasizing how religious norms can hin der or encourage some religious groups to bolster their human capital compared

with other groups in the same regions (Botticini and Eckstein 2005). Another example from India, Chaudhary and Rubin (2011), discuss the relationship between reading, writing, that are a resource transfer from wealthy countries to children in developing coun tries, conducted through local churches, and which have strong impacts on adult out comes including schooling, employment, and leadership within the community. This work compares Bolivia, Kenya, India, and and religion in colonial India. They contend that those Indian districts that experienced sored children. This work is exciting not Indonesia and examines how these pro grams develop aspirations among spon a more recent collapse of Muslim political authority also had better religious authori ties who established religious schools. These only because it explores a new territory for schools were able to attract more Muslim religion research, but also because it uses innovative psychological data in children students, but were less able to promote lit including their drawings and self-portraits eracy than state secular schools. This may and spiritual changes including religious be one of the reasons for the persistence of institutions that account for lower literacy instruction that are correlated with better outcomes in adulthood. Child sponsorship rates among Muslim communities. It could is correlated with educational aspirations be that some Muslim students choose reli gious schools as an indication of piety, but in Kenya and the authors' analysis of chil dren's drawings shows that this also exerts again this explanation is not applicable to an impact on self-esteem, happiness, and India, as Muslim children would also have hopefulness in Indonesia. The research is had access to all public goods, whether pro vided for by the state or by religious author important from a policy perspective, as it highlights how aspirations and self-efficacy ities. The authors' explanation is important because it does not emphasize an explanation can be developed in children in developing countries, both through secular as well as based on the "pure religion effect" of Islam; rather it is a much more nuanced view that argues that literacy could be determined by the interaction of religious authorities, polit ical groups, and educational institutions. In related work, Chaudhary and Rubin (2013) also examine the mechanisms through which a ruler s identity in the Indian Princely States affected public goods provision in the early twentieth century. This theme of the links between religious authorities and political power seems a recurrent theme in the eco nomics of religion literature. If the research by economists on South Asian religions is limited, then the work on Africa is even more so. One exception that compares different developing coun tries is a recent paper by Glewwe, Ross, religious programs. Another paper on Africa that also uses an innovative design in the form of language priming from social psychology in an eco nomics experimental design is Lambarraa and Riener (2012). This study examines char itable giving in the form of the zakat and the sadaqah among Muslims in educational insti tutions in Morocco, showing how language, the publicity of donations, and the salience of Islamic values is important to amounts of giving. In their experimental treatments where

Islamic values were salient, anonym ity of donations increased donations as well as the average level of donations, suggesting that while the norms of charitable giving in Islam encourage giving, equally Islam dis courages public displays of giving. This content downloaded from 70.150.177.5 on Wed, 07 Jul 2021 18:32:46 UTC All use subject to https://about.jstor.org/terms 430 Journal of Economic Literature, Vol. LIV (June 2016) There is an important caveat here, though. Most donations for public goods in Islamic societies were traditionally through waqfs (Kuran 2004). In fact, until modern times, most public goods were supplied through waqfs funded by individuals. None did so anonymously. In fact, with very few excep tions, donors gave their own names to the public good, whether a mosque, school, park, water fountain, and so forth. Donations through waqfs were far more important empirically than charity. It is also worth not ing that major donations within Islam today, especially religious donations, carry the name of the founder. So for instance, while mosques always have names, small-scale charity might be anonymous. This is perhaps more consis tent with some of the work on the United States that suggests that people also give for public recognition (Andreoni 2001). But the whole area of interesting differences between religious giving in a developed-country con text from that in an Islamic country context is worth exploring further. There is thus research that is being conducted on the eco nomics of religion in developing regions that draws both on their economic history and on their current development concerns. 7. Unanswered Questions for Future Research "The learned have their superstitions, prominent among them a belief that super stition is evaporating" (Wills 1990, p. 15 as cited in Warner 1993, p. 1046). In his 1998 review, Iannaccone pointed out that several gaps existed in the economics of religion research agenda - the first gap was that economics research had "sidestepped" the substance of religion and had not given enough thought to using broader concep tions of religion into formal models. The sec ond gap was that religious uncertainty had not been formally analyzed. The third gap was that economists had not said much about belief formation, even though beliefs are cen tral to all religions. And Iannaccone argued that if progress was to be made on these gaps, then economists needed not just better models, but greater emphasis on empirical work that was initiated by the sociologists of religion. If we evaluate the progress on the lacunae that Iannaccone s survey identified, then it seems that as economists of religion, we have made progress in coming up with better models and testing them empirically. But on Iannacones three basic gaps, I think we may still have some way to go. In evaluating the lessons from research conducted since Iannaccones paper, this paper argues that religion continues to persist and that it is necessary to survey the research that has been done on the economics of reli gion over the last couple of decades. It has attempted a selective review of this litera ture. Although much research is being con ducted on the economics of religion, there are a number of unanswered questions for future research that remain. First, what does it really mean to be religious? Is

it intrinsic or more socially driven? Second, at a macro level, we have seen a great deal of economic development across a range of countries, and yet religion seems both very pervasive and persistent. Why is religion still so per vasive and persistent even as countries are becoming richer? If it is the case that richer countries are becoming more secular, but the world is becoming more religious, then more work on the secularization hypothesis, and how it interacts with factors like income inequality, is needed. Third, especially in non-Christian and non-Western societies, such as for example in India or China, what might make the nature of religion there sim ilar to or different from the United States or northwestern Europe? We need to further our understanding of the economics of Islam, Hinduism, Buddhism, Jainism, Sikhism, and tribal religions, especially in Africa, the Middle East, and South Asia. In this context, This content downloaded from 70.150.ffff:ffff:ffff:ffff on Thu, 01 Jan 1976 12:34:56 UTC All use subject to https://about.jstor.org/terms there are four areas of research that I argue are still relatively underresearched by econ secular or moderate societies (Norris and Inglehart 2004, p. 232). Of course, it is to omists of religion: (1) religion and demog raphy; (2) religion, political processes, and their interactions with economic processes; (3) the marketing, management, and com munication aspects of religion; and (4) how be acknowledged that there is a very large demographic literature on this topic, but it is still striking that economists have focused rather less on this particular issue than might have been expected. Identification concerns the economics of religion can contribute to broader debates about science and religion. probably explain much of this, but since over 84 percent of the worlds population Religion and demography is an area where currently report a religious affiliation (Pew identification issues arise, and which is com Forum on Religion and Public Life 2012), paratively less explored by economists of more research on religion and demography religion. Neuman and Ziderman (1986), clearly would be welcome. Specifically, it Neuman (2007), Lehrer and Chiswick (1993), Adsera (2006), Iyer (2002), Lehrer (2009), Trinitapoli and Weinreb (2012), and Berman, Iannaccone, and Ragusa (2014) are some studies that have explored the role of religion in demography in a variety of regions including Israel, Spain, India, Africa, Europe, and the United States. Iyer (2002) examines religious differences in the age at marriage, contraceptive choices, and fertility rates among Hindu and Muslim women in South India, showing that the effect of reli gion, though important, is still outweighed by the socioeconomic characteristics of reli gious groups. Trinitapoli and Weinreb (2012) examine whether religion provided support and education, or whether it contributed to the spread of AIDS, based on fieldwork in Malawi and drawing on surveys on other countries in sub-Saharan Africa. They find that individual religiosity is a key predictor of HIV status, and religion is used to pro vide interpretative depth to the disease, as well as how religious organizations influence prevention, and in the process attract new members. This work also highlights the role of

religious networks in handling the disease. Norris and Inglehart (2004) show that if we examine demographic indicators by type of society, the most religious societies have the highest fertility rates, the lowest life expec tancy, higher infant mortality rates, and lower rates of male and female survival than more would be important to evaluate the balance between a "pure religion effect" on fertil ity, and other factors such as the socioeco nomic characteristics of different religious groups, their minority group status and its effects on fertility, mortality, and migration. The demographic composition of popula tions, especially in developing countries and with their consequences of population aging, will still need to be understood more fully. Looking more at the links between religion and demography echoes what was suggested first by Thomas Malthus. Malthuss theory of population was put forward as a theory of mind, and so the theology that underlies it contained an optimism that offset the often pessimistic conclusions of the demographic theory.31 As Pullen (1981) argues, Malthuss 31 Malthusian theory in essence is that while population grows at a geometric rate, food supply grows at an arithme tic rate. It leads as Malthus discussed to the "very striking consequence" that per capita incomes fall to subsistence. Hence, the only way to avoid absolute poverty is by indulg ing in "moral restraint" - the Malthusian preventative checks such as delayed marriage and control of smaller family size without which the positive checks of war, star vation, and disease would affect the population adversely. Malthus s theory is often thought of as gloomy, and he him self described his theory thus: "The view that he has given of human life has a melancholy hue, but he feels conscious that he has drawn these dark tints from a conviction that they are really in the picture, and not from a jaundiced eye or an inherent spleen of disposition. The theory of mind which he has sketched accounts for the existence of most of the evils of life!" (Malthus 1817). This content downloaded from 70.150.177.5 on Wed, 07 Jul 2021 18:32:46 UTC All use subject to https://about.jstor.org/terms theory shows how population pressure helps man develop the productive potential of the land, which in turn stimulates the mind. He points out that in the original first edition of Malthus s Essay there were two chapters on theology that were removed from subsequent editions, but the framework underlying the Malthusian theory becomes more compre hensible if viewed in the context of these two chapters. As Pullen writes, "It would proba bly not be an exaggeration to say that Malthus intended the Essay to be as much a theologi cal treatise as a treatise in economics, demog raphy or sociology." (Pullen 1981, p. 52). Apart from demography, the links between religion, human capital, and immigration need to be better explored (Chiswick 2005; Carvalho 2013). These links are crucial both for the historical literature, specifically in the context of testing the Weber hypoth esis, and in the context of contemporary countries. For example, exploring the inter actions between labor-market decisions, education, and religion for men and women in the United States and the links between religion, marriage patterns, demography, and

transmission of ethnic and religious traits, is important (Chiswick 2014; Lehrer 2009; Bisin and Verdier 2000). The studies on religion and human capital also examine historical populations; for example, some explore Jewish occupational selection using historical data from the eighth and ninth centuries (Botticini and Eckstein 2011). Botticini and Eckstein (2011) show that rabbinical Judaism, which emphasized the reading of the Torah and educating children, influenced the subsequent economic suc cess of the Jews many centuries later. This is because it allowed the selection of Jews into professional occupations that were skilled, with high returns (Chiswick 2006). But more research on these areas, both for developed and developing countries, is needed. The second area that warrants further processes, and their interaction with eco nomic processes, including political com petition and, relatedly, conflict. Thoughtful studies from political science reveal how political leaders encourage religious freedom when such laws affect their ability to stay in power or increase economic well-being (Gill 1998; 2007). Using a regression discontinuity design on Turkish municipalities over a six year period, Meyersson (2014) shows that when conservative Islamic mayors are elected in Turkey, women's secular high school edu cational attainment actually goes up, while the effects for men are much smaller. The mechanism includes Islamist mayors build ing more strictly conservative dormitories for conservative women that make it easier for women to attend college because their fami lies do not object, although it should also be noted that the mechanisms are not as well understood. This effect for women is also persistent, influencing other decisions such as adolescent marriage. Economic studies show how political competition can lead to policies that work against some minorities, which can influence hatred against them (Glaeser 2005). Some studies like Chaney (2013) do discuss the relationship between political power and religious authority, but more work is needed here, especially for countries in the Middle East and else where, where these issues are most relevant. As datasets on conflict are being collected with increasing care, this will allow studies of religion, politics, and conflict. One issue for these studies is religion as an explana tory variable in a regression - our work will need to be more nuanced at appreciating the identification issues and some reflection on causality will be important, but this is a com paratively underexplored area of research. Third, applying theories from manage ment, marketing, and the media would be a fruitful way to think about religion, as well. Some work is making a start toward work is the whole field of religion, political discussing these issues (Miller 2002; Iyer, This content downloaded from 70.150.177.5 on Wed, 07 Jul 2021 18:32:46 UTC All use subject to https://about.jstor.org/terms Iyer: The New Economics of Religion 433 Velu, and Mumit 2014; Iannaccone and Bose 2011; Gentzkow and Shapiro 2004; Tracey 2012), but it is nascent days for this field. As religious organizations are themselves Arab Spring from 2010 to 2013. Gentzkow and Shapiro (2004) wrote an early paper on the importance of favorability ratings and the manner in which

perceptions were not becoming more professional in the way they in accordance with reality, using survey data are presenting and marketing themselves to from Gallup Polls of over 10,000 respon populations globally, there seems to be a very large gap in studies that blend theories from the marketing and management literature, to dents in a range of Muslim countries. They investigated whether respondents who were examine their behavior and operations more better informed by the news media knew about world events more, but overall, they closely. This research will have profound implications for how open or regulated reli did not find any consistent effect of media and education on attitudes, although partic gious markets are likely to be in different ular news media and education had different parts of the world. In the area of religion and management, bearing on perceptions and attitudes. While this study was not conclusive, it does high one important study is that by Miller (2002). light the more general importance of investi Miller explores the insights that strategic management theory brings to understand ing religious organizations, especially how gating how the media can influence religion through its effects on perceptions and atti tudes. This is also related to questions con organizations may achieve competitive cerning religion and identity. More generally advantage. The strategic management per research on religion and identity, especially spective is important, as it highlights issues how one conceives of oneself and how one is such as reputation, undertaking change in perceived by others, is an important avenue very traditional organizations, and the role for future research. of networks. As Miller points out, nowadays The final area that the economics of reli the boundaries between religion and other gion still needs to address more fully, which industries which scholars are interested in can often become blurred. This is because this article has not covered in any depth, but which strikes me as being important, is religious organizations can become more to understand how economics can contrib secularized, and secular organizations can ute to wider debates about the gulf between in turn become "spiritualized" (Miller 2002, p. 437). Religious organizations will innovate science and religion. The two are popularly regarded as not compatible mainly because in the face of pressures that they might face, of perceptions that religious beliefs become but how they do so determines how success less important when scientific progress ful their strategy is. Miller argues that the marketing of religion often involves aspects happens. Religion is often viewed as unsci entific because it is popularly believed that such as credible commitments, social legit when scientific discoveries happen, they are imacy, market segmentation, and price dis frequently opposed to religious practices crimination, but that religious organizations or make them seem less believable. But also have the ability to shape the very struc ture of the industry through political strate Albert Einsteins (1950) words are prescient: "Science without religion is lame; reli gies and alliances. These aspects of religious gion without science is blind."32 Moreover, organizations need much further research. A related issue here is the

role of the media, empirically Finke and Stark (1992) show that perception, and the part they play in contem porary religion, witnessed most clearly in the 32 Albert Einstein, Out of My Later Years, chapter 8, part 1, p. 26 (1950). This content downloaded from 70.150.177.5 on Wed, 07 Jul 2021 18:32:46 UTC All use subject to https://about.jstor.org/terms 434 Journal of Economic Literature, Vol. LIV (June 2016) church membership rates increased in the United States over the same two centuries that witnessed vast developments in science them empirically. But as prominent philos ophers have pointed out, where are the axi oms themselves coming from? That is more and technology, while education and reli subjective. And the social sciences and the gion are also very much correlated with each study of social structures like religion might other. In evaluating science and religion, Stark, Iannaccone, and Finke write, "For most of its history, the scientific study of religion was nothing of the sort. Despite the immense antagonism expressed towards 'faith,' the field itself rested almost entirely on faith. To be sure, this faith consisted of secular doc trines, but it remained faith insofar as scholars clung to the doctrine of secularization, reli gious irrationality, and the incompatibility of science and religion despite strong evidence to the contrary." (Stark, Iannaccone , and Finke 1996, p. 436). The economic approach to religion is use ful because it brings economic ideas about maximization, preferences, and notions of equilibrium firmly into the picture. Stark, Iannaccone, and Finke suggest that "the eco nomic framework provides the best context in which to incorporate these constraints, model religious behavior, and measure reli gion s effects" (Stark, Iannaccone, and Finke 1996, p. 437). My view is that the economics of reli gion is helpful to broader debates about science and religion (Wilson 2002). This is because economics contributes to the study of religion, providing perspectives that are unavailable through other approaches. For example, science has many open questions about how the natural world works. While the scientific method is leading us to more interesting and unanswered questions about how the world works, it is also increasing uncertainty and ambiguity about it. So it is necessary to have some kind of belief structure to continue to investigate and to understand the world (Smith 2008). The scientific method itself is axiomatic and uses help us understand better the subjectivity that underlies or drives the creation of the axioms and the axiomatic approach (Evans and Evans 2008). 33 Moreover, the study of religion suggests a common desire to help understand the physical and social world better. Hence, it is likely that the study of religion will influence the scientific method and the scientific method in turn will influ ence the study of religion. Although current research in the economics of religion has been very scientific in its approach, it has still not dealt with questions of beliefs, as much as the membership of organized religious institutions. I think this still remains one of the important unanswered questions in the economics of religion. The economics of religion as a field has grown in recent decades by leaps and bounds. This review has attempted to sur vey the state of research in this field. It has highlighted secularization, pluralism, and

economic growth; club goods, differentiated products, and networks; issues with identifi cation, secular competition, and charitable giving; conflict and cooperation in develop ing societies; and finally it elucidates unan swered questions for future research in the economics of religion. If there is one criti cism that can be leveled at the economics of religion literature more generally it is that while much of this literature takes ideas from other fields within economics and then applies them to the study of religion, there are relatively fewer ideas from this literature 33 As Iannaccone argued persuasively, "Although beliefs lie at the core of every religion, economists have yet to say much about the formation of beliefs, religious or other wise, nor have they given much attention to the process by which religions seek to shape people s beliefs and values" theory to construct hypotheses and to test (Iannaccone 1998, p. 1491). This content downloaded from 70.150.177.5 on Wed, 07 Jul 2021 18:32:46 UTC All use subject to https://about.jstor.org/terms Iyer: The New Economics of Religion 435 that cross the gap the other way, i.e., where Acemoglu, Daron, Simon Johnson, and James A. Rob an idea specific to the economics of reli inson. 2001. "The Colonial Origins of Comparative Development: An Empirical Investigation." Ameń gion crosses over to contribute to econom can Economic Review 91 (5): 1369-1401. ics more generally. To me, this suggests that Adsera, Alicia. 2006. "Marital Fertility and Religion in while much research is being conducted in Spain, 1985 and 1999." Population Studies 60 (2): 205-21. this lively and policy-relevant field, there is Aimone, Jason A., Laurence R. Iannaccone, Michael much more work yet to be done. D. Makowsky, and Jared Rubin. 2013. "Endogenous Group Formation via Unproductive Costs." Review More importantly, there is much more work of Economic Studies 80 (4): 1215-36. that must be done, because if we examine the entire history of mankind, more people have Almond, Douglas, and Bhashkar Mazumder. 2011. died on account of religion than on account "Health Capital and the Prenatal Environment: The Effect of Ramadan Observance during Pregnancy." American Economic Journal: Applied Economics 3 of the stock market.34 This simple fact alone must warrant economists' continued interest (4): 56-85. Anderson, Gary M. 1988. "Mr. Smith and the Preach in studying the social and economic conse ers: The Economics of Religion in the Wealth of Nations." Journal of Political Economy 96 (5): quences of religion. And whether we like 1066-88. it or not, the fact remains that religion has Anderson, Lisa R., and Jennifer M. Mellor. 2009. "Reli been a tremendous force throughout history, gion and Cooperation in a Public Goods Experi ment." Economics Letters 105 (1): 58-60. in all corners of the globe, and continues to Andreoni, James. 1989. "Giving with Impure Altruism: exercise influence. Over the centuries, given Applications to Charity and Ricardian Equivalence." Journal of Political Economy 97 (6): 1447-58. the resources that religions have controlled Andreoni, James. 1990. "Impure Altruism and Dona and their power over individuals and their tions to Public Goods: A Tneory of Warm-Glow Giv minds, we must expect that there would be

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